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HAZARDOUS WASTE MANAGEMENT PLAN

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This plan deals with key points in implementing the complex area of hazardous waste management required by the Resource Conservation and Recovery Act (RCRA) as enforced by the US Environmental Protection Agency (EPA). Federal Facilities are not exempt from the requirements of this law. The plan covers the control and management of hazardous materials from the point they become hazardous wastes at the point of generation to the point of ultimate disposal. The scope of the plan is implementation of the EPA's philosophy of "cradle to grave" management and control of hazardous waste.

SUMMARY OF REVISIONS

The following sections were added: **2.2.9.** HAZMAT contractor responsibilities, **5.1.3.6.10.** use of spring-loaded pressure-vacuum relief valves, **5.1.4.5.2.** permanent marker requirements, **5.1.7.** accumulation point binder, **5.2.2.1. Attachment 20** EPA waste codes, **5.2.6.** DOT hazard class labels, **5.7.1.** contractor waste disposal requirements, **5.15.** photographic and radiographic wastes, **5.16.** aerosol paints and lubricants, **5.17.** lead recycling, **7.4. Attachment 36** the Security Plan. The following revisions were made: **2.2.10.1. Attachment 6** Waste Stream Characterization Process Document, **3.1.2.** 90-day Accumulation Site, **4.3.2.1.5.** annual sampling, **5.1.3.4.** closing drum rings, **5.1.6.1. Attachment 18** Accumulation Point Weekly Checklist, and **5.3.1.** MPA labels. **A bar (|) indicates a revision from the previous edition.**

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1. Introduction:

1.1. The United States Air Force is committed to proper management of hazardous wastes that are generated on their installations. The primary objective of this document is to provide a management plan that gives hazardous waste program managers the essential tools for effective management.

1.2. On May 19, 1980, the EPA published the Hazardous Waste Management System rules. Subtitle C of the Solid Waste Disposal Act, by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, directed the EPA to promulgate regulations to protect human health and the environment from the improper management of hazardous waste. The effective date of these far-ranging regulations was November 19, 1980. RCRA was again amended in 1984. The amendments will require increased management of hazardous waste by all organizations on Charleston Air Force Base (CAFB). The State of South Carolina has developed a program to implement RCRA within the State. The EPA has delegated RCRA implementation to the State. The procedures of this plan will be used to comply with Federal and State legislation and regulations. Plan revisions shall reflect changes in either level of hazardous waste management laws and regulations. Each revision to this plan will become effective immediately upon distribution unless noted herein.

1.3. Implementation of the comprehensive hazardous waste management program mandated by RCRA requires maximum cooperation of all activities on CAFB. It is the responsibility of the wing commander to ensure compliance with all RCRA requirements for CAFB and to notify, to apply for permits, and to report to EPA or the State, as required, for all installation activities, including tenants. The individual base operational units (generators) are accountable for conducting their activities in accordance with this plan. Those base units and tenant activities will provide necessary documentation to the installation commander through the Environmental Protection Committee for permit application, provide the reports required by EPA or the State, and ensure compliance with RCRA regulations and permit requirements at the facility.

1.4. This plan deals with key points in implementing the complex area of hazardous waste management required by the RCRA as enforced by the U.S. EPA. Federal Facilities are not exempt from most of the requirements of this law. The plan covers the control and management of hazardous materials from the point they become hazardous wastes at the point of generation to the point of ultimate disposal. The scope of the plan is implementation of the EPA's philosophy of "cradle to grave" management and control of hazardous waste.

1.5. This plan is also designed to address mandatory requirements of the State of South Carolina Hazardous Waste Management Regulations. CAFB is not exempt from state regulations that have been authorized by EPA to implement RCRA requirements in this state.

1.6. Hazardous materials or wastes that are not part of this plan are radioactive materials. These materials are of special interest and are governed by other regulations. Unserviceable munitions and explosives will be treated as hazardous material and will not be identified as hazardous waste until such time that the decision to discard (dispose) is issued by the disposition authority. EOD Operating Instruction 32-3005, DOD Policy to Implement the EPA's Military Munitions Rule (1 July 1998), and R.61-79.266, Subpart M provides information on disposal/treatment of unserviceable/excess munitions.

1.7. The emergency coordination reference sheet ([Attachment 2](#)) provides phone numbers and points of contact for emergency situations.

1.8. References used in developing this plan are found in [Attachment 1](#).

1.9. Definitions of common terms and abbreviations are located in [Attachment 1](#).

2. Responsibilities:

2.1. Tasked Organizations. Responsibilities for implementing this plan are distributed throughout base organizations that generate, accumulate, monitor, dispose of, or respond to incidents involving hazardous waste. Base compliance with Federal, State, and local hazardous waste laws and regulations is the responsibility of the installation commander through the base Environmental Protection Committee (EPC). The development, maintenance, and implementation of this plan is the result of CAFB EPC action. The following organizations are tasked under this plan:

EPC (Environmental Protection Committee) Chairperson

437 CES/CEV (Environmental Flight)

437 ADOS/SGGB (Bioenvironmental Engineering)

437 ADOS/SGGM (Public Health)

437 AW/PA (Public Affairs)

437 AW/SEG (Safety)

DRMO (Defense Reutilization and Marketing Office)

437 CES/CED (Explosive Ordinance Disposal Flight)

437 CES/CEV (HAZMAT)

Unit Commanders that Generate Hazardous Waste

Hazardous Waste Accumulation Point Managers/Crew Chiefs

437 CES/CEF (CAFB Fire Department)

2.2. Specific Responsibilities:

2.2.1. EPC (Environmental Protection Committee) Chairperson.

2.2.1.1. Ensure that management of hazardous waste on CAFB complies with applicable portions of 40 CFR Parts 260-271 and South Carolina State Hazardous Waste Management Regulations.

2.2.1.2. Ensure the Hazardous Waste Management Plan (HWMP) is reviewed and updated, as necessary, at least annually.

2.2.1.3. Ensure installation hazardous waste permit applications are signed.

2.2.1.4. Ensure installation hazardous waste permits are signed.

2.2.2. 437 CES/CEV (Environmental Flight):

2.2.2.1. Manages the base's hazardous waste program.

2.2.2.2. Updates Hazardous Waste Management Plan (HWMP, CAFBI 32-7042)

2.2.2.3. Conducts or coordinates hazardous waste management training for all base personnel who handle or who may be otherwise involved in the management of hazardous waste. Maintain training documentation for a minimum of three years.

- 2.2.2.4. Responsible for daily management and operation of the Hazardous Waste Storage Yard.
- 2.2.2.5. Signs hazardous waste manifests, prepares Hazardous Waste Profiles (Form 65, Hazardous Waste Profile Sheets), prepares hazardous waste reports, and compliance documentation as required by EPA, state regulatory agency, and Air Force instructions.
- 2.2.2.6. Perform hazardous waste management compliance surveys of CAFB.
- 2.2.2.7. Maintain records of hazardous waste management surveys of CAFB.
- 2.2.2.8. Prepare and submit reports to EPA and South Carolina Department of Health and Environmental Control (SCDHEC).
- 2.2.2.9. Coordinate with Federal, State, County, and City authorities on hazardous waste management procedures.
- 2.2.2.10. Develop and coordinate compliance with a Closure/Post-Closure Plan for the hazardous waste storage facility.
- 2.2.2.11. Develop a CAFB Closure/Post-Closure Plan that addresses each hazardous waste Accumulation Point.
- 2.2.2.12. Prepare permit applications as required.
- 2.2.2.13. Provide to Public Affairs Office a fact sheet on the base hazardous waste management program. The fact sheet will contain an overview of RCRA and South Carolina requirements, the number and location of treatment, storage, and disposal (TSD) facilities and accumulation points, inventory of hazardous waste, key base HWMP organizations, and an explanation of the waste disposal and recycling process. The fact sheet will be updated as required.
- 2.2.2.14. Maintain a written operating record. The following information will be recorded as it becomes available and will be perpetually maintained until the event of base or facility closure: facility layout plan, the designation and location of each hazardous waste accumulation point within the facility (**Attachment 3** and **Attachment 4**), records of waste analysis, summary reports and details of all incidents that require implementing the contingency plan, and records and results of inspections.
- 2.2.2.15. Provide all applicable records to representatives of the EPA or South Carolina who are duly designated by the Administrator.
- 2.2.2.16. Maintain routine liaison with HQAMC, EPA, and state regulatory agency in regard to hazardous waste inspections, rule interpretation, and problem resolutions.
- 2.2.2.17. Assist waste generating activities in hazardous waste identification, waste management, waste minimization, waste recycling, waste storage, and disposal.
- 2.2.2.18. Ensure hazardous waste from the installation is weighed for all disposal actions when required by CEV.
- 2.2.2.19. Act as alternate emergency coordinator.
- 2.2.2.20. Develops and updates the CAFB Waste Stream Inventory (**Attachment 5**) and the Waste Analysis Plan (Chapter 4).

2.2.2.21. Initiate action to pay the Permitted Hazardous Waste Management Facility Annual Operating Fee when the invoice is received from SCDHEC in July.

2.2.3. 437 ADOS/SGGB (Bioenvironmental Engineering).

2.2.3.1. Collect, assist with collection, or oversee contractor collection of samples for hazardous waste determination. Send or ensure samples are sent to Air Force or approved contract laboratories in accordance with the sampling and analytical requirements specified in EPA Publication SW-846 and the CAFB Waste Analysis Plan (Chapter 4).

2.2.3.2. Forward analytical results to CEV and appropriate CAFB organizations.

2.2.3.3. Assist Base generating activities and CEV in interpretation of analytical results and preparing Form 65.

2.2.3.4. Sample or ensure that surface water from the hazardous waste storage area containment cell is sampled when requested by 437 CES/CEV.

2.2.3.5. Receive and review hazardous Materials Safety Data Sheets (MSDS) for hazardous materials.

2.2.3.6. Specify personal protective equipment to be worn by personnel occupationally exposed to or who may otherwise manage hazardous waste.

2.2.3.7. Participate in hazardous waste training programs and exercises.

2.2.3.8. Coordinate with Accumulation Point Managers/Crew Chiefs, CEV, Fire Department, and Ground Safety on location of hazardous waste accumulation points.

2.2.4. 437 ADOS/SGGM (Public Health).

2.2.4.1. Provide health education to waste site workers, including hazard communication (HAZCOM) training to supervisors.

2.2.5. 437 AW/PA Public Affairs (PA).

2.2.5.1. Act as the focal point for inquiries from the news media and concerned citizens regarding hazardous waste and in the event of a hazardous waste incident or accident.

2.2.5.2. Assist the Base Commander during situations involving hazardous waste incidents by keeping interested news media and the public aware of events and curtailing rumors through the dissemination of coordinated, accurate information. Respond to the accident/incident site, to the Command Post, and to the Public Affairs duty section where an information center may be established.

2.2.5.3. The presence of hazardous waste in a contained area will probably not constitute reasonable cause to forcibly deny access to the area by accredited news media representatives. Applicable security and safety provisions will apply, however. Under no circumstances will Public Affairs Office personnel escort news media representatives into a hazardous or potentially dangerous area.

2.2.6. 437 AW/SEG (Safety).

2.2.6.1. Inspect hazardous waste Accumulation Points during the regular, annual ground safety inspection. All safety items will be inspected and made part of the formal inspection report.

2.2.7. Defense Reutilization and Marketing Office (DRMO).

2.2.7.1. Coordinate the physical removal of hazardous wastes from CAFB.

2.2.8. 437 CES/CED (Explosive Ordnance Disposal Flight).

2.2.8.1. Coordinate shipments of ordnance for disposal with CEV.

2.2.8.2. Ensure that no ordnance is transported to Charleston AFB for disposal/ detonation. Such items must be transported to a permitted facility for disposal/ detonation.

2.2.9. 437 CES/CEV (HAZMAT).

2.2.9.1. Pickup “empty” 55 gallon drums and arrange for recycling through a DRMO contractor.

2.2.9.2. Pickup aerosol paint and lubricant containers for puncturing, draining, and recycling. Punctured cans will be placed in Charleston County Recycling Bins.

2.2.9.3. Pickup “empty” paint cans for accumulation/ crushing. These will be profiled and turned in to the Hazardous Waste Yard.

2.2.9.4. Pickup oil and hydraulic cans, puncture, drain, and recycle cans in the Charleston County Recycling Bins.

2.2.9.5. For large quantities of unopened material that can not be used, the shops/ generators will contact HAZMAT x4929 or x4930. HAZMAT will try to find a user for large quantities either on base or through DRMO.

2.2.9.6. Pickup fluorescent tubes for accumulation as “Universal Wastes” in boxes, label and turn in to the Hazardous Waste Storage Yard for disposal/ recycling.

2.2.9.7. Operate the scrap metal yard to receive scrap metal and coordinate disposal/ recycling of aircraft scrap tires.

2.2.9.8. Read bar codes of returned “empty” containers to update the EMIS system.

2.2.9.9. Operate household hazardous materials recycling program.

2.2.10. Requirements for Commanders of Units That Generate Hazardous Waste.

2.2.10.1. The generating activity should request a hazardous waste determination through the installation Environmental Manager using the Waste Stream Characterization Process Document (**Attachment 6**) and procedures provided in Section **5.3**. Submit requests to CEV to ensure that all wastes are evaluated and that hazardous wastes are properly classified. Requests must provide a description of the process that generated the wastes, including all MSDSs for materials used in the process.

2.2.10.2. Provide safe equipment and locations for initial Accumulation Points. Coordinate each location with CEV, Ground Safety, Fire Department, and Bioenvironmental Engineering.

2.2.10.3. Ensure that the management of hazardous waste Accumulation Points complies with Federal and State hazardous waste management regulations and this plan.

2.2.10.4. Designate personnel to act as Hazardous Waste Accumulation Point Managers/Crew Chiefs and Alternates.

- 2.2.10.5. Allow appropriate facilities, shops, and equipment to be inspected for hazardous waste management regulatory compliance by CEV and authorized State or Federal inspectors.
- 2.2.10.6. Ensure that all personnel that handle hazardous waste or who are otherwise involved in hazardous waste management receive initial hazardous waste training and annual refresher training.
- 2.2.11. Hazardous Waste Accumulation Point Managers/Crew Chiefs.
 - 2.2.11.1. Assume overall responsibility for management of the Hazardous Waste Accumulation Point.
 - 2.2.11.2. Maintain control over the Accumulation Point such that only approved personnel can place wastes into the hazardous waste containers.
 - 2.2.11.3. Ensure Accumulation Point has proper signs/postings.
 - 2.2.11.4. Ensure that the Accumulation Point has a spill kit.
 - 2.2.11.5. Ensure that an approved fire extinguisher is readily available if flammable hazardous waste is stored in the Accumulation Point.
 - 2.2.11.6. Ensure that personal protective equipment is available at the Accumulation Point.
 - 2.2.11.7. Ensure that secondary containment is used for containers holding liquids.
- 2.2.12. All Tasked Unit Commanders.
 - 2.2.12.1. Comply with tasking in Closure and Preparedness and Prevention sections of this plan.
- 2.2.13. 437 CES/CEF (CAFB Fire Department).
 - 2.2.13.1. Provides a 24-hour emergency response telephone number that is written on all hazardous waste manifests. In case of emergency, CEF will have all hazardous and non-regulated waste shipment information on hand. CEV will deliver copies of the waste manifests to CEF for every shipment. CEV will provide CEF additional information regarding the shipments when necessary.

3. Charleston AFB Hazardous Waste Stream Inventory:

3.1. This section of the Hazardous Waste Management Plan (HWMP) identifies the various base units that use hazardous materials and generate hazardous waste. The waste is identified at the point of generation and tracked through its accumulation, storage, transportation, and disposal. A list of hazardous waste accumulation points is presented in [Attachment 3](#). A map highlighting hazardous waste generator locations, accumulation points, and the permitted facility is provided in [Attachment 4](#). Contact Environmental Flight (437 CES/CEV) for current copies of [Attachment 3](#) and [Attachment 4](#).

3.1.1. An initial Accumulation Point is an area where waste is initially accumulated under control of the shop supervisor of the process generating the waste. The maximum volume of a hazardous waste permitted (for continuing accumulation) at each initial Accumulation Point is 55-gallons or one quart of acutely hazardous waste (P-listed waste). For CAFB, this means although there is a volume limit, there is no time limit on how long the waste can be accumulated at an Accumulation Point. Once the volume limit is reached, the waste must be moved to the Hazardous Waste Storage Yard within 72 hours. If an additional accumulation point is ever needed, the accumulation point

crew chief/manager shall coordinate with CEV to select and design the location of the accumulation point to minimize any threat to human health and the environment.

3.1.2. A hazardous waste Accumulation Site is an area near the waste generating activity where hazardous waste is accumulated in containers or tanks for a period of up to 90 days. An Accumulation Site has no volume limit but does have a 90-day time limit. Accumulation Sites do not require permits, but they do have more stringent requirements than Accumulation Points. CAFB normally does not utilize Accumulation Sites, but when required, an Accumulation Site is established at the Hazardous Waste Storage Yard for wastes that have not been characterized.

3.1.3. A RCRA-permitted storage facility is an area that has been granted a RCRA Part B Permit either from EPA or the state to store hazardous waste. The Hazardous Waste Storage Yard (Bldg. 691) is the facility permitted to store hazardous waste at CAFB in accordance with Part B permit SC3570024460. The permit should be referred to for specific operating procedures and restrictions. Wastes restricted from land disposal may be stored at this facility for up to one year. Wastes not restricted from land disposal may be stored at this facility indefinitely, however it is the policy of CAFB to ship hazardous waste off-site as expeditiously as possible.

3.2. Hazardous Waste Accumulation Map. The map in [Attachment 4](#) shows locations and buildings at CAFB where hazardous wastes are initially accumulated (Accumulation Points).

3.3. Hazardous Waste Stream Inventory.

3.3.1. Charleston Air Force Base maintains a hazardous waste stream inventory for every hazardous waste stream generated on base ([Attachment 5](#)). CEV is the office of primary responsibility for the CAFB hazardous waste stream inventory. CAFB will not handle, store, transport, dispose of or inventory non-DOD owned hazardous wastes or materials except as authorized; CEV does sign manifests for non-DOD owned hazardous waste. CAFB is not permitted to receive hazardous waste from a foreign or off-site source.

3.3.2. CAFB will ensure that all wastes are properly characterized and classified as either hazardous or non-hazardous wastes in accordance with the CAFB Waste Analysis Plan (WAP) (Chapter 4). The WAP is developed and maintained by CEV. Hazardous wastes will be characterized by CEV on Form 65 ([Attachment 7](#)). Information from Form 65 will be used by CEV to maintain and update the hazardous waste stream inventory.

4. Charleston AFB Waste Analysis Plan:

4.1. Federal and State Requirements. This is the Waste Analysis Plan (WAP) for CAFB as required by 40 CFR 264.13(a), (b) and (c) and, 40 CFR 270.14(b)(3), State of South Carolina Hazardous Waste Management Regulations, and the Air Force Policy. This plan provides the basis for identifying and characterizing all CAFB hazardous waste streams that are generated within property boundaries per 40 CFR 262.11. Refer to Chapter 3 for CAFB's hazardous waste stream inventory.

4.2. CAFB Plan Contents. The CAFB WAP is intended to comply with Federal and South Carolina RCRA requirements and includes specific requirements for the identification and evaluation of hazardous wastes at the base. The plan contains base procedures for identifying and evaluating hazardous waste streams in order to complete a hazardous waste profile sheet on each hazardous waste stream. The hazardous waste profile sheet, Form 65, is provided in [Attachment 7](#). Form 65 is a computerized version of DRMS Form 1930.

4.2.1. The WAP describes detailed procedures for obtaining physical and chemical analyses from all associated waste generating activities at CAFB including procedures for selecting waste parameters for analysis and rationale, selecting waste sampling methods, identifying analytical methods, and evaluating hazardous waste streams' analysis frequency.

4.3. Hazardous Waste Characterization Process. Hazardous waste characterization will involve three sequential steps: 1) waste identification, 2) waste evaluation, and 3) results interpretation and documentation.

4.3.1. Waste Identification. Waste Identification is a process in which all wastes generated at CAFB are identified. The waste generator should ask the following questions to determine if they have a waste stream that must be evaluated:

4.3.1.1. Is it a waste? If the answer to any of the following four questions is yes, the material is a waste:

4.3.1.1.1. Is the material no longer useful for its intended purpose because it is dirty, out of specification, or a spill residue?

4.3.1.1.2. Is it an unintended or unusable byproduct?

4.3.1.1.3. Does the base intend to discard the material for eventual treatment, storage, recycling, or disposal?

4.3.1.1.4. Is it produced by cleanup at a previously uncontrolled waste site?

4.3.1.2. Is it a solid waste? A solid waste is generally defined as any discarded material (including solids, liquids, and containerized gases) which is abandoned, recycled, or considered inherently waste-like (see 40 CFR 261.2).

4.3.1.3. Is it a hazardous waste? If the material is a solid waste, the solid waste should be evaluated to determine if it is a hazardous waste. A material is a hazardous waste if it has not been excluded from regulation and:

4.3.1.3.1. It is a characteristic hazardous waste (e.g., ignitable, corrosive, reactive, or toxic) per 40 CFR 261 Subpart C or,

4.3.1.3.2. It is a listed hazardous waste in 40 CFR 261 Subpart D (as defined in [Attachment 1](#)) or,

4.3.1.3.3. It is a mixture of a listed hazardous waste and solid waste?

4.3.1.3.4. This evaluation can be conducted by either using the waste generator's knowledge of the hazard characteristics of the waste in light of the materials or processes used, or by analytical testing as described in 40 CFR 261 and this WAP.

4.3.2. Waste Evaluation. Waste evaluation is the process of determining which of the wastes identified in the first step may be classified as hazardous wastes. This process can be conducted either by using the generator's knowledge of the waste or by analytical testing. In either case, the evaluation must be based on the EPA solid waste and hazardous waste definitions (refer to [Attachment 1](#)).

4.3.2.1. Analytical testing is required at CAFB for all process waste streams (i.e., an unintended or unusable byproduct of a process used by a shop). Testing is not normally required for unusable materials (e.g., expired, unused commercial chemical products or laboratory chemi-

cals in their original, marked containers). At a minimum, waste analysis must contain all the information necessary to treat, store, and dispose of the waste.

4.3.2.2. The generator must request a hazardous waste determination through the CEV Environmental Manager, who will evaluate the waste based on the generator's knowledge of the waste and the definitions provided in Sections 1.9. and 4.3.1. For new and a re-evaluation of existing waste streams, shops must request the hazardous waste determination using **Attachment 7** as soon as the waste is generated and prior to it leaving the waste generating area (Refer to Section 5.3., Determination and Turn-In of Hazardous Waste).

4.3.2.3. If it is not possible to determine if the waste is hazardous based on existing data (e.g., MSDS, product data), then the Environmental Manager will complete a Sample and Analysis Request Form (**Attachment 8**) identifying which analytical tests are required and the rationale. The materials used as well as the waste generating process will be considered when selecting analytical parameters [e.g., paint sludge from a paint stripping process would be analyzed for TCLP metals, total volatile organic compounds (TCLP analytes as well as underlying hazardous constituents), and ignitability]. **Attachment 9** lists common toxicity characteristics that are analyzed.

4.3.2.4. The completed form is submitted to Bioenvironmental Engineering (437 ADOS/SGGB), who collects the sample, places a sample information label (**Attachment 10**) on the drum, and submits the sample to the laboratory for analytical testing. Sampling and analysis must be conducted in accordance with the requirements specified in Appendices I, II, and III of 40 CFR 261. Specific analytical methods and sampling protocols that will be used during the waste characterization process are presented in **Attachment 11** and **Attachment 12**. The analytical work for CAFB waste streams will be performed by certified Air Force or contract laboratories.

4.3.2.5. Frequency of analysis. Each waste stream is evaluated at the time of initial generation, per 40 CFR 262.11. Process waste streams will be sampled annually, at a minimum. Analysis will be completed to ensure that waste streams are accurate and up to date and evaluations will be repeated when any process or operation generating the waste has changed. This includes a change in the product(s) used during the generation of the waste. Profiles for unused products are not required to be updated annually.

4.3.2.6. Sampling Protocol. A representative sample of the waste stream will be obtained by Bioenvironmental Engineering using the EPA procedures specified in Appendix I of 40 CFR 261, which are included as a reference in **Attachment 12**.

4.3.3. Results Interpretation and Documentation. The analytical results must be interpreted to determine if tested waste streams are hazardous according to EPA or State definitions. The interpretation will be based on EPA regulations on the identification and listing of hazardous waste in 40 CFR Part 261. The generator must also determine if the waste must be treated before it is land disposed. This is done by determining if the hazardous waste meets the treatment standards in 40 CFR 268.40, 268.45, and 268.49.

4.3.3.1. The Environmental Manager is responsible for interpreting the analytical test results. The results of any used oil analyses will be compared to 40 CFR 279.11 to ensure that the material meets the specifications for used oil (e.g., less than 1000 ppm of total halogens).

4.3.3.2. Environmental Flight (437 CES/CEV) will use the analytical results as well as the

generating activities waste process knowledge to complete or update an existing Form 65. All hazardous waste streams will be labeled with the hazardous waste label (**Attachment 13**), once they are characterized as hazardous on the profile sheet.

4.3.3.3. CEV will also utilize Form 65 for developing profiles for non-RCRA wastes. A non-regulated waste label (**Attachment 14**) is required for non-regulated waste streams.

4.3.3.4. A Waste Profile Sheet must be created or updated by CEV whenever a process change or request for analysis affects the characteristics of a waste stream.

4.3.4. Permit Restrictions. If a waste from a new or changed process is identified as having an EPA waste code number that does not appear on the facility permit, CEV shall request approval from SCDHEC to modify the permit if the waste will be stored for more than 90 days or placed in the hazardous waste storage facility. It is not necessary to change the permit if the waste is to be held for less than 90 days.

4.3.5. Reporting and Record keeping Requirements for Land Disposal Restriction Regulations. Land disposal restriction (LDR) regulations, published in 40 CFR 268 require a generator that is managing a LDR waste, which is excluded from the definition of hazardous or solid waste, or exempt from Subtitle C regulations under 40 CFR 261.2 - 261.6 subsequent to the point of generation, to document the waste, its exclusion or exemption, and the disposition of the waste.

4.3.5.1. LDR Forms to Vendors for Wastes Shipped Off-site. If a waste does not meet the treatment standards in 268.40, 268.45, or 268.49 the generator must send a one-time written notice, at minimum, to each treatment, storage, or disposal facility receiving the waste. A copy of this notice must be retained in CEV files. Be aware that there may be additional requirements imposed by the State receiving the waste. A new notification will be provided whenever there is a change in the waste profile or treatment facility. The procedure for preparing LDR forms to vendors for hazardous wastes shipped off-site is outlined below.

4.3.5.1.1. CEV shall provide the vendor with a copy of the waste profile data, including the LDR determination, for each waste stream so that LDR forms may be completed.

4.3.5.1.2. CEV will review the LDR forms, which are drafted by the vendor, to ensure that the requirements of 40 CFR 268 have been met for each waste stream. These requirements may include, but are not limited, to the following:

4.3.5.1.2.1. The notice for restricted waste not meeting treatment standards in 40 CFR 268.41 through 268.43, or exceeding prohibition levels in 268.32 or RCRA Section 3004(d), will include all information required by the Generator Paperwork Requirements Table in 268.7(a)(4).

4.3.5.1.2.2. If the waste meets the treatment standard for land disposal, then CEV will ensure that the notice also includes a certification statement, that is drafted as specified in 268.7(a)(3)(i).

4.3.5.1.2.3. For lab packs to be shipped off-site, CEV will ensure that the generator paperwork requirements in 268.7(a)(9) have been met.

4.3.5.1.2.4. In the rare instance, that a case-by-case extension under 268.5 or a petition to allow disposal under extreme circumstances in 268.6 is required, CEV will ensure that the requirements in 268.7(a)(4) are met.

4.3.5.1.2.5. CEV comments will be provided to the vendor prior to the day of shipment so that the LDR forms may be revised, as necessary. All notifications and certifications will be prepared and maintained per 268.7.

4.3.5.1.3. On the day of shipment, CEV will perform a final review of the LDR forms, and obtain a copy of the forms to include with the manifest in the facility's file. If the waste meets the treatment standard for land disposal, then CEV will sign the certification statement included in the notice.

4.3.5.2. One Time Notice to File for Excluded Materials. For an area generating an excluded, exempt or recycled waste, CEV will generate and file a one-time notice, at a minimum, stating such generation, the subsequent exclusion from the definition of solid or hazardous waste or exemption from Subtitle C regulation, and the disposition of the waste in the area's waste management file. Examples of wastes for which a One Time Notice To File is required under 40 CFR 268.7(a)(7) are as follows.

4.3.5.2.1. Characteristic sludge for reclamation 40 CFR 261.2(c)(3).

4.3.5.2.2. Spent Lead-acid batteries that are being reclaimed 40 CFR 261.6(a)(2)(iv).

4.3.5.2.3. Acetone rags with no free liquids.

4.3.5.2.4. 40 CFR 261.3(a)(2)(iii), wastewater with de minimus levels of solvents.

4.3.5.2.5. 40 CFR 261.3(a)(2)(iv).

4.3.5.2.6. Used oil 40 CFR 261.6(a)(4).

4.3.5.2.7. de minimus exemption for metalworking fluids.

4.3.5.2.8. Freon contamination under 40 CFR 261.3(a)(2)(v)(B).

4.3.5.2.9. Wastewater that is mixed with domestic sewage going to a publicly-owned treatment works (POTW) for treatment 40 CFR 261.4(a)(1)(ii).

4.3.5.2.10. Industrial wastewater that are point sources and are subject to regulation under Section 402 of the Clean Water Act 40 CFR 261.4(a)(2).

4.3.5.2.11. Non-terne plated used oil filters that have been hot-drained 40 CFR 261.4(b)(13).

4.3.5.2.12. Scrap metal 40 CFR 261.6(a)(3)(ii),

4.3.5.2.13. A new notice will be generated whenever there is a change in the waste profile.

4.3.5.3. Record keeping Requirements. A copy of all notices, certifications, waste analysis data, and other documentation will be maintained by CEV on-site for at least three years from the date the waste was last sent to an off-site treatment, storage, or disposal facility.

4.4. Waste Parameter Selection. Typical hazardous waste streams at CAFB are presented in **Attachment 5**. Waste parameters selected are based on the suspected hazardous waste characteristics of the waste. When determining which analyses are to be performed for a particular waste stream, the following criteria will be used:

4.4.1. Flash Point. Flash Point is determined through a test procedure that identifies whether a waste is ignitable (D001). Ignitable hazardous wastes have flash points less than 140 °F. Some

hazardous waste streams contain varying concentrations of ignitable solvents that have the potential to lower the waste's flash point to less than 140 °F. Because process knowledge is not adequate to accurately predict the flash point of these waste streams, the waste must be tested to determine ignitability. If the waste is a liquid, the sample will be analyzed to determine ignitability using SW-846 Method 1010 or 1020. If the waste is a solid, then ignitability will be determined by SW-846 Method 1030.

4.4.2. Corrosivity. In order for a waste to be considered corrosive (D002), it must be a liquid. Generator knowledge, a visual inspection, or the Paint Filter Test (SW-846 Method 9095) will be used to determine if the waste is a liquid. If it is an aqueous liquid (contains water) and generator's knowledge of the waste indicates that it may be corrosive (i.e., product data or other information suggests that the pH of the waste may be less than 2 or greater than 12), the waste will be analyzed by SW-846 Method 9040. If the waste is a non-aqueous liquid, then generator knowledge will be used to evaluate corrosivity; if historical evidence or other information indicates that the waste may be corrosive, then the waste will be analyzed using SW-846 Method 1110 (Corrosivity towards Steel).

4.4.3. Reactivity. If the waste stream previously contained cyanide, sulfide, or historical evidence or other information indicates that it may be reactive, then reactivity (D003) will be determined. MSDS and other product data will be reviewed to determine if cyanide or sulfide analyses are required (e.g., some electroplating solutions contain cyanide and some anti-gal and molydag type compounds contain sulfides). Reactivity will be determined per Section 7.3 of SW-846.

4.4.4. Toxicity Characteristics. If an extract from a representative sample of waste, which when tested in accordance with the Toxicity Characteristic Leaching Procedure (TCLP) (SW-846 Method 1311 as referenced in Appendix II of 40 CFR 261), contains any of the analytes at a concentration equal to or greater than the regulatory level listed in Table 1 of 40 CFR 261.24 ([Attachment 9](#)), the waste is a hazardous waste. All new and non-recurring waste streams, except for laboratory chemicals and unused commercial chemical products, will be evaluated for toxicity characteristics. The analytical methods selected will be based on the generator's knowledge of the waste (i.e., methods for those analytes suspected of being present in the waste at concentrations greater than the regulatory limit). If toxicity characteristic analyses will be performed and the waste may be sent offsite for land disposal, then an evaluation of Underlying Hazardous Constituents (UHC) must be performed (see [4.4.5](#)).

4.4.5. Underlying Hazardous Constituents. As per 40 CFR 268.7(a), for all characteristically hazardous wastes that may be land disposed, the generator must evaluate whether any of the constituents listed in 40 CFR 268.48 are expected to be present above treatment standards. Wastes will be analyzed when constituents are suspected of being present at or above Universal Treatment Standards (UTS). The analytical methods selected will be based on the generator's knowledge of the waste (e.g., product data). Bioenvironmental Engineering will ensure that the laboratory's target analyte list for each given method includes all analytes of concern (e.g., those analytes required to determine if the waste is characteristically hazardous as well as those UHC suspected to be present at or above treatment standards).

4.4.5.1. Total Suspended Solids (TSS) and Total Organic Carbon (TOC). The purpose of the TSS and TOC analyses is to differentiate between wastewaters (less than 1% by weight of TOC and TSS) and non-wastewaters, so that the results may be compared to the appropriate UTS (wastewater versus non-wastewater). Unless the waste is easily determined to be a

non-wastewater because of high organic (TOC) content (e.g., organic solvent waste) OR high solids content (greater than 1% TSS, which is 10,000 ppm solids), TOC and TSS analyses will be conducted on all waste streams that are being analyzed for UHC.

4.4.5.2. Organic Compounds. Many organic compounds are included in the UHC list. Treatment standards are typically based on total analyses; however, some compounds require TCLP analyses (e.g., methanol). Total analyses, instead of TCLP, will be conducted if the waste is suspected to contain toxic characteristic organics as defined by 40 CFR 261.24 and organic UHCs. Results from the total analyses will be compared to the TCLP limits. For liquids (less than 0.5% TSS), total analysis results are equivalent to TCLP results. For solids, the results of the total analysis can be divided by 20 (the dilution factor used in TCLP analyses for solids) prior to comparison to toxicity characteristic standards presented in 40 CFR 261.24. This evaluation assumes a worst case condition where all constituents are completely leached (100%) from the waste during extraction. If results indicate that toxicity characteristic standards may have been exceeded for solids, taking into account the dilution factor, then a TCLP analysis may be conducted to determine actual leach ability, if the EPA-established holding time criteria can be met.

4.4.5.3. Nickel. Since nickel is a common alloy, wastes that are suspected of containing toxic characteristic inorganics, as defined by 40 CFR 261.24, will be analyzed for nickel by SW-846 6010. Total nickel analyses will be conducted for metal bearing wastewaters, while TCLP nickel will be conducted for any metal bearing non-wastewaters (solids and sludge).

4.4.6. Paint Filter Test. To determine if free liquids are present in a container, generator's knowledge (process knowledge, product data), a visual inspection, or the Paint Filter Test is conducted to characterize the waste to ensure proper disposal. If free liquids can not be determined based on the generator's knowledge or a visual inspection, then the Paint Filter Test (SW-846 Method 9045) is to be conducted on the waste to demonstrate that no free liquids exist in the container.

4.4.7. Used Oil. Used oil is not regulated as a hazardous waste if the total halogen concentration is less than 1000 ppm (see footnote 2 to Table 1 of 40 CFR 279.11). To determine that used oil specifications for energy recovery in 40 CFR 279 have been met, a representative sample of the used oil will be analyzed for arsenic, cadmium, chromium, lead, flashpoint, total halogens, and PCBs.

4.5. Quality Assurance and Quality Control (QA/QC). The purpose of the QA/QC program is to produce data of known quality that satisfies the objectives of the sampling event. The QA/QC program followed by the base is presented in the Armstrong Laboratory Services Guide, AL/OE-TR-1994-0136. Adherence to the procedures presented in this document will ensure that data of sufficient quality has been obtained to evaluate the waste stream

4.6. WAP Revision. The CAFB WAP will be evaluated and reviewed annually by CEV and SGGB to ensure that the most up-to-date procedures are followed. The plan will also be reviewed whenever:

4.6.1. The sample frequency changes due to changes in the annual volume of base's hazardous waste streams.

4.6.2. Analytical parameters change due to changes in the processes generating hazardous waste.

4.6.3. EPA waste codes and/or DOT identification numbers change due to regulatory revisions.

4.6.4. Disposal methods change due to revisions to land disposal restrictions or changes in disposal contracts.

5. Charleston AFB Hazardous Waste Management Procedures:

5.1. Specific Waste Management Procedures. Hazardous waste is accumulated at Charleston Air Force Base (CAFB) within designated Accumulation Points and stored at the RCRA-permitted storage facility (Hazardous Waste Storage Yard, Bldg. 691). Hazardous waste may only be accumulated and temporarily stored at these pre-designated areas. Each type of accumulation area must comply with the associated requirements outlined in this section. Accumulation Point Management. Each Accumulation Point must comply with the following requirements:

5.1.1. Location. The area used for the accumulation of hazardous waste, must be one of the areas specified in [Attachment 3](#). If an additional Accumulation Point is required, the location must be selected in coordination with the Base Environmental Manager. The CEV Environmental Manager will designate a location for the point that will minimize the threat of the waste stream to human health or the environment in the event of a release. The Environmental Flight (437 CES/CEV) will maintain a current copy of [Attachment 3](#). CAFB will comply with the following physical requirements for the location of Accumulation Points:

5.1.1.1. The Accumulation Point container must be located at or near the point of generation where the waste initially accumulates, which is under the control of the operator of the process generating the waste.

5.1.1.2. EPA requirements for the location of Accumulation Points (40 CFR 262, Subpart C).

5.1.1.3. State requirements for the location of Accumulation Points (R.61-79.262, Subpart C).

5.1.1.4. Accumulation Point Crew Chiefs/Managers must obtain pre-approval by the Base Fire Department, Ground Safety, Bioenvironmental Engineering, and the Base Environmental Manager for the location of new Accumulation Points. Approval must take into consideration potential environmental consequences if hazardous waste is released from the Accumulation Point during a spill, fire or explosion.

5.1.1.5. Containers placed at Accumulation Points which hold ignitable or reactive wastes must be located at least 50 feet inside the CAFB property boundary. These containers must also be kept away from sparks, open flames, extreme heat, or other sources of ignition.

5.1.1.6. The construction of each Accumulation Point must include an impermeable base containment system that is capable of preventing environmental contamination due to container overfilling or leaks. Concrete containment must be treated with a sealant to prevent spills from absorbing into or passing through the concrete. Containers shall not be placed on dirt, sand, gravel, or grass surfaces.

5.1.1.7. Containers must not be located near any floor drains that lead to sanitary or storm water sewers.

5.1.1.8. Different types of hazardous waste must be accumulated in separate containers. Also, non-hazardous waste must not be mixed with hazardous wastes. Each hazardous waste stream must be specifically posted or designated as a separate accumulation (i.e., AP-2A, AP-2B, etc).

5.1.1.9. For incompatible wastes, segregated containment must be provided, by using either separate containment areas or by means of separate diked areas, or sloped containment to separate sumps. Hazardous chemical reactions that cause heat, fire, explosion, pressure, or the evolution of toxic or flammable decomposition products due to incompatible chemical reactions must be prevented. If unsure whether a waste is compatible with the container itself, contact the Environmental Manager before placing waste in the container. Incompatible wastes are identified in [Attachment 15](#). The mixing of incompatible material may have the potential consequence as noted. Incompatible wastes, or incompatible wastes and materials must not be placed in the same container. In addition, hazardous waste must not be placed in an unwashed container that previously held an incompatible material.

5.1.1.10. Hazardous wastes must not be located near anything with which they are incompatible. For example, lead-acid batteries should not be located near any aluminum structures or surfaces because contact between acid and aluminum may produce flammable hydrogen gas and could lead to a fire or explosion. Containers holding wastes that are incompatible with any other wastes or material present must be physically separated from the other materials by means of a dike, berm, or wall.

5.1.1.11. In areas where unauthorized access to the Accumulation Point by persons not authorized to accumulate waste in the containers is possible, security must be provided by a fence or similar access control device.

5.1.1.12. "No Smoking" signs must be placed conspicuously wherever there is a hazard from ignitable or reactive waste.

5.1.1.13. At outdoor Accumulation Points, containers must be protected from direct sunlight and precipitation by means of a roof, tarpaulin, or similar device.

5.1.1.14. Indoor Accumulation Points must be well ventilated. Highly Volatile Organic Compounds (VOCs) in particular can present serious health hazards when in storage. Also, in the event of a spill or leak, effective ventilation should be installed to safely direct toxic or flammable vapors and fumes out of the work area. Care must be taken to prevent exhausted air from reentering work areas through doors, windows, and air intakes on buildings.

5.1.1.15. Drums must be placed on pallets to allow for ease of removal when full and to keep them away from accumulated precipitation or spills.

5.1.2. Signs. Each Accumulation Point will have a sign containing the following information: the words, "Hazardous Waste Accumulation Point", the Accumulation Point Designation, e.g. AP-8, the Crew Chief's name and telephone number, the Alternate's name and telephone number, and the sign is to be painted "park service" brown. Lettering is to be white. The sign must be posted above or adjacent to the hazardous waste containers.

5.1.2.1. Each waste stream at an Accumulation Point must be identified with a letter designation, A, B, C, etc. and have a sign/posting above or adjacent to the container; e.g., AP-8A, AP-8B, AP-8C. Up to 55 gallons (or 1 quart of acutely hazardous waste) of each separate waste stream may be accumulated at each designated Accumulation Point.

5.1.3. Operating Requirements.

5.1.3.1. Ensure that all hazardous waste is placed at an approved Accumulation Point.

5.1.3.2. Ensure all waste streams are identified to CEV per the requirements in Sections 4.3.2. and 5.3.1.

5.1.3.3. Ensure that hazardous waste is placed in a DOT-approved container that is in good condition, and properly marked, labeled, and grounded as indicated in this plan. To determine the proper DOT-specification to use for selecting a container, the regulations in 49 CFR 172.101 must be consulted or request assistance from CEV. Maintain control over the Accumulation Point such that only approved personnel can place wastes into the hazardous waste containers. There must never be a doubt about the contents of a container holding hazardous waste.

5.1.3.4. Containers used to store hazardous waste must be kept closed at all times, except when waste is being added to or removed from the container. In general, a container is closed if its original closures, such as bung caps or drumheads, are secured to the container. Therefore, a closed-head 55-gallon drum must have its original (or equivalent replacement) bung caps screwed tightly into the bung openings. During storage, an open-head 55-gallon drum must have its drum head in place with the retaining ring properly secured with the appropriate nut and bolt. The ends of the retaining ring must meet to within approximately 0.25 inches and the holding nut should be tightened toward the bolt head. See Attachment 16. Any other types of containers used to store hazardous waste must be kept closed in a similar manner. Flip top lids (strictly for solid waste streams) must be securely fastened with all latches down when not in use.

5.1.3.5. If the hazardous waste is combustible or flammable, spark-proof wrenches (made of bronze or aluminum) must be used to prevent accidental ignition of the waste due to sparks.

5.1.3.6. Containers must not be stored or handled in a manner that may cause them to rupture or leak. Whenever evidence of leaks, tampering, or damage to containers in an accumulation point is found, the Environmental Manager and Bioenvironmental Engineering will be notified to advise on cleanup procedures and initiate an investigation into the incident. The following precautions should be taken at both Accumulation Points and at the Hazardous Waste Storage Yard to prevent container ruptures and leaks:

5.1.3.6.1. Containers must not be overfilled. Some solid hazardous waste (such as paint masking paper) may be filled to the drum lid. Containers used for accumulation of liquid hazardous waste will be filled to approximately ninety percent of the capacity of the container. For example, only fill liquid 55-gallon drums to approximately 50 gallons or no more than 3-4 inches from the top of the 55-gallon drum. Liquids expand in containers as the temperature increases. A steel drum that is painted a dark color can easily rise to temperatures above 100 °F and the pressure created by the expansion of the liquid causes bulging heads and damages the integrity of the container. Bulging containers also create a safety hazard for personnel adding waste to or handling the containers.

5.1.3.6.2. Containers must be protected from freezing during cold weather. Many materials go through a freeze/thaw cycle during changing weather conditions. This freeze/thaw cycle causes stress on drums and can result in leaking containers.

5.1.3.6.3. Containers bearing ignitable hazardous waste must be grounded. Grounding will prevent build-up of static electricity, which may create sparks capable of igniting flammable vapors. Also use a bonding wire to connect the container you are pouring from

to the container you are pouring into when transferring flammable liquids. This will prevent sparks caused by the build-up of static electricity during pouring operations.

5.1.3.6.4. Drums and other containers must be handled and transported with equipment designed for the task. Drum grappler attachments may be purchased for tow motors to securely grab and move containers. Secure containers to pallets before moving pallets. Use drum carts designed for the types of containers used by your facility to reduce the likelihood of dropping a container during handling. Never balance drums on the forks of a forklift or tow motor.

5.1.3.6.5. Containers used to accumulate liquid hazardous waste will incorporate a device (such as a funnel) to prevent spillage during transfer operations. After filling, the funnel must be removed and the container closed. If the funnel has any hazardous waste residues remaining, the residues should be rinsed into the container or wiped clean, and the funnel placed in a suitable closed hazardous waste accumulation container.

5.1.3.6.6. Drums containing flammable liquids must not be stacked. Other drums must not be stacked more than 2 high.

5.1.3.6.7. Containers will be stored in an area which is well-away from or protected from damage due to the movement of vehicles such as trucks, fork lifts, POVs, etc.

5.1.3.6.8. A generator can accumulate as much as 55 gallons of a hazardous waste stream (or 1 quart of an acutely hazardous waste stream) at an Accumulation Point. When the container limit has been reached (e.g., 3-4-inches of headspace for liquids or filled to the drum lid for solids), fill in the Accumulation Start Date on the Hazardous Waste Label, and ensure the drum is delivered to the Hazardous Waste Storage Yard within 3 days.

5.1.3.6.9. Containers with liquid hazardous waste or liquid non-regulated waste must be placed on spill containment pallets.

5.1.3.6.10. Spring-loaded pressure-vacuum relief valves may be installed on containers to relieve pressure buildup, if approved in writing by CEV.

5.1.4. Container Requirements.

5.1.4.1. Ensure that hazardous wastes are collected and stored in DOT-approved containers. To ensure compatibility of the waste with the container or its liner, determine the proper DOT-specifications by consulting the regulations in 49 CFR 172.101 or contact CEV for assistance. Generally, containers that have been used to ship hazardous materials can be used to ship hazardous wastes of the same chemical composition.

5.1.4.2. Maintain containers in proper condition, e.g. no pitting, no sharp edge creases or dents, no material defects, no bulging heads.

5.1.4.3. Ensure containers are properly marked and labeled before adding any hazardous waste. There must never be a doubt about the contents of a container holding hazardous waste. Hazardous waste must not be placed in a container that previously held an incompatible material.

5.1.4.4. Containers accumulating hazardous waste must have the following information on the drum: the words, "Hazardous Waste" (provided by the yellow Hazardous Waste Label), the word, "Flammable" for flash points less than or equal to 141 °F and the container contents

(similar to line 8 of profile sheet).

5.1.4.5. Container labels should be placed on the top 1/3 of the drum when the first drop/piece of waste is placed in the drum. Do not collect waste in unlabeled drums.

5.1.4.5.1. The generator name, address, and EPA ID number are preprinted on the CAFB hazardous waste labels (**Attachment 13**). Container labels must include the following information that is found on the Hazardous Waste Profile Sheet. The Proper DOT shipping name, the EPA Waste Number(s), and the DOT identification number (UN or NA number).

5.1.4.5.2. All information must be written neatly in black permanent marker so that all information is legible.

5.1.4.5.3. The blue label shown in **Attachment 14** will be used for wastes that are not RCRA hazardous wastes.

5.1.4.6. Proper storage is mandatory at all times, including segregation of incompatible wastes. Incompatible wastes must be separated or protected from mixing by means of a dike, berm, wall, or other device. Incompatible wastes are identified in **Attachment 15**.

5.1.4.7. Any container that is damaged or leaking hazardous material may be over packed in a larger container approved by CEV. The wastes may also be removed to an acceptable container.

5.1.4.8. Any container being reused for packaging of hazardous waste will have all prior labels and stenciling removed and/or painted over. This is required to eliminate any error in determining the actual content of the container.

5.1.5. Equipment Requirements. Generating activities must maintain communication and alarm systems, fire and spill control equipment, and an emergency eyewash station near their initial Accumulation Points.

5.1.6. Inspection Requirements.

5.1.6.1. All Hazardous Waste Accumulation Points must be inspected every seven days (every Tuesday). During the inspection, areas where containers are stored must be examined to look for leaking containers and deterioration of containers and deterioration of the area in which containers are placed. Each inspection must be documented and will include the name of the inspector, the location of the Accumulation Point, date of the inspection, time of inspection, deficiencies that the inspector identified, and a description of actions taken to correct the deficiencies. **Attachment 18** depicts the Accumulation Point inspection checklist used at CAFB. Inspection records must be maintained for each Accumulation Point for at least three years from the date of each inspection.

5.1.6.2. Inspections of hazardous waste Accumulation Points are the responsibility of the Accumulation Point Crew Chief/Alternate; however, the Environmental Manager will periodically verify that inspections are being conducted by auditing the inspection file of each Accumulation Point Crew Chief/Alternate.

5.1.6.3. The Environmental Manager or designated representative shall also visit each Accumulation Point quarterly to ensure that the containers and the Accumulation Point are in good condition and comply with all applicable regulatory requirements.

5.1.6.4. ECAMP (see [Attachment 2](#)) inspections also include inspections of Accumulation Points and records. Internal ECAMP inspections are completed every year except on every third year, an external ECAMP inspection will be conducted by AMC Headquarters personnel.

5.1.6.5. South Carolina Department of Health and Environmental Control (SCDHEC) annually conducts no-notice inspections of CAFB Hazardous Waste Accumulation Points, Hazardous Waste Storage Yard and supporting documents such as training records, Turn-in Documents, Manifests, Hazardous Waste Profile Sheets, etc.

5.1.6.6. Installation Commanders also conduct no-notice inspections of HW generating, accumulation, and storage activities.

5.1.7. Accumulation Point Binder. Each Accumulation Point must maintain a binder containing the following information. Documents in this binder must be current. Keep all paperwork in your binder for 3 years. Documents over 3 years old will be kept on file at CEV.

Tab A: Written Job Descriptions

Tab B: Training Documents

Tab C: Weekly Inspection Checklists

Tab D: Profile Sheets

Tab E: Copies of Hazardous Waste Turn-In Documents

Tab F: Copies of submitted Waste Stream Characterization Documents

Tab G: Security Plan

5.1.8. Closing of an Accumulation Point. If it becomes necessary to close a Hazardous Waste Accumulation Point, the Accumulation Point Crew Chief must provide a memo to CEV stating the reason for closure. The Accumulation Point Binder and all Accumulation Point documentation must be given to CEV (the Environmental Manager).

5.2. Hazardous Waste Storage Yard:

5.2.1. Hours of Operation. The Hazardous Waste Storage Yard is operated by CEV personnel, who are responsible for its maintenance and inspection. Normal hours of operation for acceptance of waste into the Hazardous Waste Storage Yard are: Monday through Thursday 8:00 - 10:00 and 1300-1500.

5.2.1.1. Accumulation Point Crew Chiefs should plan to make deliveries during these hours; however in case of emergencies, contact Hazardous Waste Storage Yard personnel at x5181. Under no circumstances are containers to be left outside the Hazardous Waste Storage Yard.

5.2.1.2. Wastes are turned in to the Hazardous Waste Storage Yard using Hazardous Waste Turn-In Document ([Attachment 19](#), draft of form). One copy will be held by Hazardous Waste Storage Yard and one copy will be returned to the customer for filing in their Accumulation Point Binder.

5.2.2. Description. The Hazardous Waste Storage Yard is a RCRA-permitted TSD facility used to store wastes received from the Accumulation Points and other base agencies. Wastes are stored in

the yard while awaiting disposal by a commercial contractor through the DRMO. The wastes are stored in various sized containers ranging from 5-gallon cans to 85-gallon drums.

5.2.2.1. There are 30 permitted EPA Waste Codes that may be stored at the Hazardous Waste Storage Yard (**Attachment 20**) on permitted storage pads. Other waste codes are required to be stored in the Hazardous Waste Storage Yard 90-day Storage Locker.

5.2.2.2. The permitted hazardous waste container storage area is divided into seven areas (storage pads). Pads A, B, C, D, E, and F are surrounded by trenches 3' wide and 3' deep. Pad G is used for storing solid wastes and is surrounded by a trench 1' wide and 18" deep. Pad G may contain up to twenty-two 55-gallon containers and pads. Pads A, B, C, D, E, and F may contain up to thirty-two 55-gallon containers each. The maximum permitted volume of container storage is 11,770 gallons.

5.2.2.3. The bulk storage tanks, which contain used oil, are surrounded by a 26" high dike with valved drainage to an oil/water separator.

5.2.2.4. Access to the permitted storage facility is controlled by a 8' high chain link fence with two locking gates. The facility layout is shown in **Attachment 21**.

5.2.2.5. Four 5,000-gallon bulk storage tanks are also located in the Hazardous Waste Storage Yard. These tanks are used for the collection of used oils (hydraulic, synthetic, mixed oils, and off-specification fuels), which are recycled off-site by being burned for energy recovery and are not hazardous waste.

5.2.2.6. The PCB storage facility (Bldg. 695) is primarily used for the storage of absorbent, personal protective equipment (PPE), and new containers. Occasionally, fluorescent light ballasts and transformers, which are managed as PCB items under the Toxic Substance Control Act (40 CFR 761), are stored in the PCB storage facility prior to disposal. The PCB storage facility, which can accommodate eighteen drums of PCB liquids, has an extended roof, lifting hoist, and safety shower.

5.2.3. Container Log. To account for all drums at the Hazardous Waste Storage Yard, the yard personnel will maintain a Hazardous Waste Storage Yard Container Log. The log shown in (**Attachment 22**) is used to record a container identification number assigned to each container in the yard. The waste description, yard location, date in, weight and other information goes into the log. The container identification number is an assigned sequential number used for tracking the containers.

5.2.4. Inspections. The yard is inspected each operating day, not on weekends and holidays. The inspection provides thorough inspection of the facility as well as discrepancy notation. The purpose of the inspection is to evaluate the following:

5.2.4.1. Storage Containers. Inspect the storage containers for leakage, deterioration, pressure buildup as evidenced by bulging container heads, and missing or open bungs.

5.2.4.2. Storage Tanks. Inspect the tanks and surrounding area for corrosion, erosion, leakage of fixtures, leaking of seams, and wet spots.

5.2.4.3. Facility Security. Check storage facility door locks for proper operation.

5.2.4.4. Inspect warning signs for secure attachment.

5.2.4.5. Fire Protection. Inspect the fire extinguisher for full charge and accessibility.

5.2.4.6. Communications Equipment. Check and test the communications equipment for operation.

5.2.4.7. Listing of Materials in Storage. Check drum labels for contents and verify the number of containers for each material in storage.

5.2.4.8. Spill Response and Containment Equipment. Inspect the waste spill control and containment equipment and materials.

5.2.4.9. The daily inspection checklist is shown in [Attachment 23](#). Discrepancies are identified on the Discrepancy Log shown in [Attachment 24](#).

5.2.5. Containment Cells. Rainwater accumulated in the containment cells for Pads A-F is drained via piping to a drainage ditch east of the container storage area by opening piping valves. The rainwater was tested in January 1999 and determined to be non-hazardous. Unless there is a change in the generating process (e.g., hazardous waste spill), rainwater will be released after a visual inspection.

5.2.5.1. If evidence of hazardous waste spillage has occurred, the spilled material is to be pumped out of the secondary containment cell by portable pumps into 55-gallon drums and analyzed for percentage of each contaminant. The only exception to analyzing spilled material will be if it is obvious how much and what type of contaminant is spilled. In this event, drums would be filled with spilled wastes without analysis being performed. CEV will make final determinations on all analysis to be performed.

5.2.6. DOT Hazard Class Labels.

5.2.6.1. Containers shall be labeled in accordance with the following requirements prior to transfer to the Defense Reutilization and Marketing Office (DRMO) or prior to shipment off-site.

5.2.6.2. DOT hazardous materials warning labels, which represent the hazard of the material being shipped, must be affixed to containers before being offered for transportation. It is the responsibility of CEV to determine whether or not labels are required, any multiple labeling requirements, and the proper location of the labels on the package.

5.2.6.3. Exceptions from Labeling Requirements. Labels are not always needed on every package containing hazardous waste or material. For example a freight container having a volume of 640 cubic feet or more should not be labeled, but should be placarded. The same is true for portable tanks that are properly placarded. Other Regulated Materials or ORMs are not labeled if they do not contain any other material classed as a hazardous material. These materials are identified by the ORM mark.

5.3. Determination and Turn-in of Hazardous Waste. In order for a generator to determine if they have a hazardous waste, the following steps must be followed:

5.3.1. The generator must supply CEV with a copy of the applicable Material Safety Data Sheets (MSDSs) and a completed Waste Stream Characterization Process Document (WSCP) ([Attachment 6](#)). The WSCP document includes a complete description of the process that the material has undergone. In addition, the generator must attach a Material Pending Analysis (MPA) Label ([Attachment 25](#)) to the container.

5.3.1.1. If the waste stream has never been profiled, attach only an MPA label and submit the WSCP document ([Attachment 6](#)) to CEV.

5.3.1.2. If you have a waste stream that has a profile, keep the appropriate label attached (either a blue non-regulated or a yellow hazardous waste label, as appropriate) along with the MPA label on the drum and submit the WSCP document ([Attachment 6](#)) to CEV.

5.3.1.3. If the waste stream is due for annual sampling, you must attach a Material Pending Analysis (MPA) label to the drum (see [Attachment 25](#)) and write, "Confirmatory Sample" on the MPA label and submit the WSCP document ([Attachment 6](#)) to CEV.

5.3.1.4. All MPA labels must have the following information: Accumulation Start Date (for New Waste Streams-the date the first drop of waste goes into the drum, for Existing Waste Streams-the date the WSCP form was submitted to CEV), POC (Point of Contact), Telephone Number, and the Material Description/Origination.

5.3.1.5. The container will remain in the generator's possession until a final determination is made, or the container limit has been reached. When the container limit has been reached (55 gallons or 1 quart of acutely hazardous waste), it must be moved within 72 hours to either a 90-day Accumulation Site or the Hazardous Waste Storage Yard. Generators should ensure that a representative sample is taken prior to reaching the 55-gallon (or 1-quart for acutely hazardous wastes) limit so that the waste profile sheet can be completed prior to delivery to the Hazardous Waste Storage Yard.

5.3.2. If a hazardous waste determination can not be made with the information provided in the WSCP document, CEV will submit a sample request to Bioenvironmental Engineering, 437 MG/SGGB.

5.3.3. SGGB will obtain a sample of the waste or have a contractor sample the waste and send it to the appropriate laboratory for testing. A sample information label will be placed on the container by SGGB or by the contractor ([Attachment 10](#)). Upon receipt of the laboratory report, SGGB will forward a copy to CEV for review.

5.3.4. CEV will determine if the material is a hazardous or non-regulated waste and will develop a profile sheet for the waste stream. CEV will provide the generator with a copy of the profile sheet for placement in the generator's Accumulation Point Binder and provide a copy to the Hazardous Waste Storage Yard. The profile sheet will contain the appropriate information to be used for filling out the Hazardous Waste Label or Non-Regulated Waste Label ([Attachment 13](#) and [Attachment 14](#)).

5.3.4.1. The MPA label should be removed and the appropriate Hazardous or Non-regulated Waste label should be placed on the container/ drum. All hazardous waste must be marked and labeled as outlined in Sections [5.1.4.4.](#) and [5.1.4.5.](#) The sample information label must not be removed from the container.

5.3.5. At this point, the generator will have all the information needed to correctly mark, label, store, and transport the waste to the Hazardous Waste Storage Yard. The generator turns the waste into the Hazardous Waste Yard using Hazardous Waste Turn-In Document, shown in [Attachment 19](#).

5.4. Procedures for Unknown/Orphan Material. Unknown or orphan (ownerless) material containers may come from numerous sources such as construction sites or shop material storage bins. Typically,

they do not have labels and/or require laboratory analysis before their disposition can be determined. These containers pose a large environmental liability because they may contain hazardous materials that could leak, causing environmental damage requiring costly investigation and cleanup. The containers could also result in a regulatory action by SCDHEC/EPA if discovered during their periodic base inspections. Unknown or orphan material will be handled as follows:

5.4.1. The first and most important action is to get and maintain positive control of the container to stop or prevent a release. Upon discovery, the container must be stored in a secure area with secondary containment until proper dispensation can be determined. The Fire Department HazMat Team may be required to assist in moving/over packing the container if it is in an unsuitable condition or thought to pose a safety hazard.

5.4.2. Orphan material shall be transported to a storage area designated by CEV; all other unknown material shall remain properly stored with its owner until it is identified.

5.4.3. It is important to note that at this time we are not considering the material to be a waste so do not put a Hazardous Waste Label on it. Place a "Material Pending Analysis" label on it and date it with the date that it was discovered; see [Attachment 25](#).

5.4.4. Notify CEV to begin action to determine what the material is and what should be done with it. If the material must be sampled to determine what it is, follow the sampling procedures specified herein.

5.4.5. Upon identification of the material, CEV will issue a determination for use or disposal. Should CEV determine that the material is unusable and is a hazardous waste, CEV will provide a profile sheet detailing the EPA waste code(s), proper shipping name, UN/NA number, etc. At this time, the "Material Pending Analysis" label must be removed and a Hazardous Waste Label must be placed on the container. All hazardous waste management criteria apply at this time.

5.4.6. Contact CEV for clarification on any situation on which you may have a question.

5.5. Hazardous Waste Disposal by DRMO. After accumulation at the point of generation and temporary storage at the Hazardous Waste Storage Yard, most hazardous waste generated at CAFB is disposed of through DRMO. Disposal of hazardous waste requires two documents: an up-to-date hazardous waste profile sheet, and DD Form 1348-1.

5.5.1. Hazardous Waste Storage Yard personnel will ensure that all paperwork is complete and correct for document signing, and coordinate with DRMO for the pick up of items to be shipped. Hazardous waste inventory should be kept to a minimum.

5.5.2. Hazardous Waste Storage Yard personnel will inspect the waste and certify that the waste is identified, packed, marked and labeled in accordance with federal and state hazardous waste management or toxic substance control regulations. This certification must be on or accompany the turn-in document (DD Form 1348-1) before it is received by DRMO. Hazardous Waste Storage Yard personnel will also ensure that hazardous waste turned in to DRMO is weighed for disposal in the presence of an authorized DOD representative.

5.5.3. Hazardous Waste Storage Yard personnel will provide copies of the 1348-1 documents to CEV and identify total disposal costs for each delivery order. CEV will record the disposal costs on the reverse side of the AF Form 616 and attach a copy of the 1348-1 documents and costs to the AF Form 616. CEV will also attach a copy of the delivery order when received from DRMO on pick up day.

5.5.4. Contractor personnel working with DRMO, on pre-inspection and/or pick up day, will ensure containers have properly completed Hazardous Waste Labels and proper DOT hazard classification labels on the containers. Contractor personnel, on pick up day, will also provide manifest documentation to CEV for review and signatures. CEV will record the manifest number in the CEV Manifest Record Log used for tracking receipt of Hazardous Waste Manifests from the disposal/receiving facility.

5.5.5. Hazardous Waste Storage Yard personnel will ensure that authorized CEV personnel (who are designated to sign manifests) are on site prior to loading.

5.6. Hazardous Material Turn-in to DRMO.

5.6.1. Hazardous Material that has not been removed from its original package may be sold to DRMO if it is in excess, if the specification for the product has changed, or if the product can not be used because its shelf life has expired. The container must be in good condition with no leaks, corrosion, etc. A DD Form 1348-1, **DOD Single Line Item Release/Receipt Document**, must be prepared for this by the generating organization. Although the contents may be hazardous material, the material is not classified as hazardous waste and does not require the hazardous waste label and markings.

5.7. Hazardous Waste Disposed of by Contractor.

5.7.1. All hazardous, universal, and non-regulated waste disposal must be coordinated through CEV. Contractors generating waste must fill out the Waste Stream Characterization Process Document for Contractors ([Attachment 26](#)). Only CEV Hazardous Waste Managers will sign manifests.

5.8. On-Installation Transportation.

5.8.1. It is important to ensure that any waste transported on-installation is transported in a manner that will not endanger the health of installation personnel or the environment. The activity that generates hazardous waste must ensure that hazardous waste is accumulated and subsequently transported in the proper DOT-specification containers. To determine the proper DOT-specification to use, refer to the regulations in 49 CFR 172.101 and 49 CFR 173 or request assistance from CEV.

5.8.2. The Accumulation Point Crew Chief/Manager must also ensure that containers are in good condition. Prior to turning in hazardous waste each container must be inspected by the Accumulation Point Crew Chief/Manager to ensure that it is in good condition and suitable for transportation. The container must have no leaks and no accumulation of residues outside of the container. Also, there must be no serious corrosion, dents, sharp creases, or bulging heads. If the container has a leak or if it is not in good condition, the waste in the drum must be transferred to a container in good condition or the container must be over packed in a salvage drum.

5.8.3. Personnel transporting hazardous waste must have completed hazardous waste management training described in Chapter 6 and must also have completed training appropriate for the vehicle used to transport the waste (e.g., forklift training, etc.). Before the vehicle leaves with the waste, it must be closely inspected. If the vehicle is carrying containers, the vehicle must be inspected to ensure that containers are securely loaded and that incompatible wastes are not loaded next to each other. Vehicles transporting bulk wastes must be examined to ensure that all pumps, valves, and fittings are closed tight and secured.

5.9. Record Keeping.

5.9.1. RCRA requires the maintenance of certain records on base. The type of records, along with the retention time and a reference to a description of each record, is presented in [Attachment 27](#). The Environmental Manager shall maintain or know the whereabouts of the files identified in the table and shall make them available to appropriate state and federal inspectors upon request.

5.9.2. The Environmental Manager will also maintain copies of hazardous waste profile sheets, DD Form 1348s, and lists of all hazardous waste transfers to the DRMO. The records must be kept for at least three years after disposing of the waste streams. The Environmental Manager will also maintain an updated copy of this Hazardous Waste Management Plan, the accompanying hazardous waste stream inventory, and the waste analysis plan.

5.10. Reporting. Except for LDR notification and the Closure Plan, reporting requirements are outlined below. LDR notification and Closure Plan reporting requirements are presented in Chapters 4 and 10.

5.10.1. Headquarters AMC.

5.10.1.1. CEV will report HW management activities per AFI 32-7002, *Environmental Information Management Systems*.

5.10.1.2. CEV will submit Pollution Prevention Reports quarterly identifying hazardous waste generated and disposed per AFI 32-7080. Report is due 45 days after the end of each quarter.

5.10.2. State.

5.10.2.1. If requested by SCDHEC or otherwise required by regulatory requirements, CAFB will submit reports pursuant to 40 CFR 264 (or 265 as appropriate) Subparts F and K through N.

5.10.2.2. CEV will submit Computerized Quarterly Hazardous Waste Reports to SCDHEC within 30 days after each quarter.

5.10.2.3. CEV will submit updates to the Notification of Regulated Waste Activity Form 2701 as required.

5.10.2.4. CEV will submit the yearly Waste Minimization Report to SCDHEC.

5.10.2.5. Twenty-four Hour Reporting. The permittee (CAFB) shall report to SCDHEC any noncompliance with the permit that may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the permittee becomes aware of the circumstances.

5.11. Universal Wastes. In Part 273 of the 40 CFR, EPA streamlined regulations for the collection and management of lamps, pesticides, mercury thermostats, and batteries. See the Universal Waste Label ([Attachment 28](#)). Some pesticides are considered Universal Waste but CEV will provide guidance on a case by case basis.

5.11.1. Generators of Used Batteries.

5.11.1.1. Alkaline batteries are not universal wastes. They are accumulated as non-regulated items for turn-in to the Hazardous Waste Storage Yard. Attach a Non-regulated label to drums containing Alkaline Batteries. Write *Alkaline Batteries, non-regulated material* in the contents

section of the label.

5.11.1.2. The following batteries are Universal Wastes: Ni-Cad, Lithium, Lead-Acid, and Mercury. Attach a Universal Waste Label (**Attachment 28**) on containers used to accumulate Universal Waste batteries. Write "Universal Waste-Batteries" on the label itself. Mark the battery type in the contents section of the Universal Waste Label and mark the Accumulation Start Date on the label (the date the first battery is placed in the drum).

5.11.1.3. Do not accumulate used batteries for more than 30 days. Used batteries must be delivered to the Hazardous Waste Storage Yard to ensure the 30-day accumulation requirement is not exceeded.

5.11.1.4. Batteries are to be accumulated in separate containers by battery type. Batteries from different manufacturers may be placed in the same container but they must be the same type of battery.

5.11.1.5. Do not accumulate batteries in metal containers. Place the batteries in DOT approved plastic drums.

5.11.1.6. Generators must tape the ends of the batteries to prevent a short circuit.

5.11.1.7. Turn in used batteries to the Hazardous Waste Storage Yard, using the Hazardous Waste Turn-In Document (**Attachment 19**, draft of form) and provide an MSDS for each type of battery and manufacturer.

5.11.1.8. Vehicle lead-acid batteries are not accumulated as universal wastes, but are accumulated in specific locations for recycling under a local contract. Also, they may be turned into the dealer when a new battery is purchased. Lead-Acid Automotive Batteries which are turned in for lead recovery or reclamation are excluded under 40 CFR 261.6 (a)(2)(iv). A one time written notification is required. The following must be stated in memorandum form and turned into CEV: description of generation (i.e. unusable Lead-Acid Automotive batteries), exclusion (i.e. 40 CFR 261.6 (a)(2)(iv)), and disposition: (i.e. Company Name (reclaimer) and address).

5.11.2. Generators of Spent Lamps/ Fluorescent Bulbs. The following lamps must be managed as Universal Waste: fluorescent bulbs, high intensity discharge bulbs, neon bulbs, mercury vapor bulbs, high pressure sodium bulbs, and metal halide bulbs.

5.11.2.1. The spent bulbs must be kept in a closed cardboard box with taped ends. The original bulb box may be used but place new bulbs in a separate box.

5.11.2.2. Place a Universal Waste Label on the spent bulb box and write "Universal Waste-Lamps" on the label. The date the first bulb is placed into the box must be written on the label. This is the accumulation start date. Universal Waste-Lamps must only be stored for up to 30 days at the shop. Call HAZMAT at x4929 or x4930 for pick-up.

5.11.3. Generators of Mercury Thermostats.

5.11.3.1. Mercury thermostats are considered Universal Waste and CEV will create a profile for each shop generating thermostats.

5.11.3.2. Mercury thermostats must be accumulated in appropriate DOT shipping containers that are closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably fore-

seeable conditions.

5.11.3.3. A Universal Waste Label must be placed on the container with the words, "Universal Waste-Mercury Thermostats." Mark the contents section of the label "Mercury (thermostats)," and add the Accumulation Start Date (the day the first thermostat goes into the drum). Complete the label with the UN number (UN2809).

5.11.3.4. Universal Waste-Mercury Thermostats must be turned into the Hazardous Waste Storage Yard within 6 months of the Accumulation Start Date. Use the Turn-in Document (CAFB Form 414) for turn-in.

5.11.4. Hazardous Waste Storage Yard Personnel Responsibilities. The following procedures are to be implemented by the Hazardous Waste Storage Yard personnel for Universal Wastes.

5.11.4.1. When a generator delivers batteries to the Hazardous Waste Storage Yard, the Hazardous Waste Yard (HWY) personnel must ensure the Turn-in Document is correct and identifies the batteries properly.

5.11.4.2. Ensure the earliest (oldest) accumulation start date is recorded on the label when batteries are added to a battery accumulation container.

5.11.4.3. Ensure mercury batteries are stored in a well-ventilated container and in an area so that any hydrogen gas vapors from these batteries can be vented properly. Remove the gasket or seal from the containers.

5.11.4.4. Ensure the batteries are protected to prevent short circuit.

5.11.4.5. Ensure the proper shipping name, UN identification number, Accumulation Start Date, and battery type are marked on the label.

5.11.5. HAZMAT will turn in spent Universal Waste Lamps to the Hazardous Waste Storage Yard on the day of shipment. The bulbs will be weighed and labeled with the correct DOT information.

5.12. Used Oils and Contaminated JP-8. Although Used Oil that is recycled is not regulated as hazardous waste; both the EPA and South Carolina specify management requirements. Numerous types of used oil are generated and collected at CAFB including hydraulic oil, synthetic oil, lubricating oil, and off-specification fuels. Used oil, which is recycled off-site by being burned for energy recovery, is not regulated as a hazardous waste as long as it contains less than 1000 ppm of total halogens. Used oil may be burned for energy recovery when it contains less than 5 parts per million (ppm) of arsenic, less than 2 ppm of cadmium, less than 10 ppm of chromium, less than 100 ppm of lead, and less than 4000 ppm of total halogens. Also, the flashpoint must be 100 degrees F or greater (40 CFR 279.11).

5.12.1. Each shop that generates used oil must segregate the oil by type (e.g., hydraulic, synthetic, etc.) and place the used oil near the point of generation. The used oil is placed in either a steel drum or a bowser. Generators must avoid mixing gasoline with JP-8/ or Used Oils.

5.12.2. All used oil collection bins are required to be closed unless used oil is being added or removed from the drums located in the bins.

5.12.3. Each drum/ bowser containing used oil must be marked with the following: "Used Oil" and a description of the type of used oil (e.g., "hydraulic oil", "synthetic oil", etc.)

5.12.4. Empty hydraulic oil and oil in cans will be picked up by HAZMAT (x4929 or x4930). The cans will be punctured, drained, and recycled. The oil will be turned into the Hazardous Waste Storage Yard.

5.12.5. JP-8 fuels that do not contain gasoline, must be accumulated and labeled as "Contaminated JP-8/Flammable Liquid." Refer to [Attachment 29](#) and post the attachment in the shop.

5.12.6. Used oil and JP-8 fuels that have not been contaminated with gasoline may be turned into the Hazardous Waste Yard without a profile sheet. The generator uses Hazardous Waste Turn-In Document ([Attachment 19](#), draft of form) to certify the contents of the drum or bowser.

5.12.7. Contaminated fuels that contain MOGAS (gasoline), must be turned in as a hazardous waste. Contact CEV to obtain the required waste profile sheet for drum turn-in at the Hazardous Waste Yard.

5.13. Polychlorinated Biphenyls. The Toxic Substances Control Act (TSCA) of 1976 and subsequent amendments (40 CFR 761) regulate the use and disposal of polychlorinated biphenyl (PCB) items at CAFB. Unless there is a hazardous waste constituent, PCB items are exempt from regulation under 40 CFR 261 through 265, 268, 270, and 124. PCB items are temporarily stored in the PCB storage facility (Bldg. 695) at the Hazardous Waste Storage Yard prior to disposal. All PCB wastes at CAFB have only PCBs and no hazardous constituent.

5.13.1. Procedures for the management and disposal of PCB light ballasts. All ballasts not labeled "No PCBs" will be assumed to contain PCBs. Leaking ballasts shall be assumed to contain PCBs until identified by the "No PCBs" label.

5.13.2. Personal Protective Equipment (PPE) must be worn when examining a leaking ballast. The PPE must consist of latex gloves worn under neoprene gloves, Saranex-coated Tyvek coveralls, neoprene boots and a face shield.

5.13.3. For leaking ballasts, a drop cloth of 6 mil plastic, sized as appropriate for the job, must be placed under the work area. The ballast, light fixture, and any other contaminated articles must be cleaned before the ballast is removed. Remove all excess PCB liquid with a clean rag(s), then wipe down the articles with another clean rag containing mineral spirits. Perform a third wipe with a clean rag to ensure any excess mineral spirits and dissolved PCBs are removed. Place all rags on the drop sheet. The ballast may now be removed and placed on the drop cloth.

5.13.4. After ballast removal, all contaminated tools and light fixtures must be cleaned using mineral spirits. Repeat the cleaning procedures specified above.

5.13.5. After final cleanup, the ballast, rags, and PPE must be rolled up in the drop sheet and sealed with duck tape. Place tape on corners or other areas of the wrap that may be subject to puncturing from the contents. Place the sealed drop sheet into a 6 mil plastic bag and goose neck seal the bag with duct tape. Place a preprinted PCB label on the bag and label the bag with "Contents: Ballast and Rags," "Bldg No.," and "Date Removed." Immediately take the bag to the PCB storage facility in bldg 695 of the Hazardous Waste Storage Yard for accumulation in an approved DOT container.

5.13.6. The Hazardous Waste Storage Yard must inspect the PCB items weekly and dispose of the ballasts through DRMO within 90 days of removal.

5.14. Empty Containers. All empty containers or inner liners that have contained a hazardous material will be drained to ensure that the definition provided in Section 1.8 of this plan is met. Do not rinse drums. Requirements for empty containers are provided in [Attachment 30](#) and [Attachment 31](#).

Shops are required to ensure personnel are familiar with and comply with these requirements. [Attachment 30](#) and [Attachment 31](#) should be posted in appropriate location(s) in the shop work areas.

5.14.1. Empty Aerosol Containers must be turned into HAZMAT at x4929 or x4930. The containers will be punctured and recycled by the HAZMAT team.

5.14.2. Turn in empty 55 gallon drums to HAZMAT (x4929 or x4930). Leave original markings/labels on the containers.

5.14.3. CEV/ HAZMAT will remove any markings that may indicate USAF ownership. The empty drums will be sent to DRMO for resale or for disposal by local contract. If the container is cleaned of residue/purged of vapors to remove any hazards, then the container is not subject to the transportation requirements of 49 CFR 173 Subpart C for shipment of hazardous materials.

5.14.4. 49 CFR 173.29(a) requires that empty containers which previously held hazardous material that have not been cleaned/purged must be transported in the same manner as when it previously contained the hazardous material. The container must have the proper shipping name, ID marking, and hazard warning label on the container.

5.15. Procedures for Photographic and Radiographic Wastes. The processing of photographic and radiographic (x-ray) image films and papers produces effluent containing varying concentrations of silver compounds. Recovering silver from image processing wastes conserves a non-renewable precious metal source and also ensures processing effluents discharged do not exceed regulatory requirements.

5.15.1. Fixer solution and rinse water effluents from photographic and imaging processing that are discharged to the sanitary sewer must have silver recovery units installed to reduce silver concentrations to below local POTW standards.

5.15.2. To confirm that silver recovery units are achieving the required discharge limits, shops must periodically test the effluent. Test paper kits are available for this purpose. Testing must be documented.

5.15.3. In addition, annual confirmatory laboratory analysis must be obtained by Bioenvironmental Engineering and provided to the base Environmental Flight (CEV).

5.15.4. Shops must follow the manufacturer recommended procedures for replacing silver recovery units as required to ensure discharge limits will not be exceeded.

5.15.5. Spent silver recovery units must be turned into Base Supply or the base Hazardous Waste Yard as follows: Supply Distribution/ Receiving Element point of contact is LGRDCI, x4791 and the Hazardous Waste Storage Yard point of contact is CEV, x5181.

5.15.5.1. Dry Silver Recovery Cartridge (Cartridges not containing steel wool.) Per 40 CFR 261.2, sludges being reclaimed are not a solid waste, and therefore not a hazardous waste. Shops must mark/label the cartridge "Dry Silver Recovery Cartridge, Silver to be reclaimed." These should be delivered to Receiving Element for turn-in to DRMO.

5.15.5.2. Flake Silver (From electrolytic processing.) This is a material, not a waste. Mark

these “Flake Silver” and record weight in grams. These must be delivered to Receiving Element for turn-in to DRMO.

5.15.5.3. Wet Silver Recovery Cartridges (Cartridges containing spent photographic solutions). These are considered to be a hazardous waste because the spent photographic solution exhibits a toxicity characteristic. When the cartridges are spent, they must be labeled, stored as a hazardous waste, and turned into the Hazardous Waste Yard. In addition to labeling the container “Wet Silver Recovery Cartridge,” attach a hazardous waste label containing the following information: “Hazardous Waste Liquid, n.o.s. (D011),” NA 3082, EPA Waste No. D011. The spent cartridges will be sent for silver recovery if possible.

5.15.5.4. Caution! Spent steel wool cartridges must always be filled with liquid before storage and transport to preclude the potential of fire. If the cartridge contains steel wool, mark “Steel Wool Cartridge” on the container.

5.15.5.5. X-Ray Film. These do not exhibit the characteristic of toxicity and are not a hazardous waste. Mark/label these “Exposed/processed X-Ray Film.” Deliver these to base Supply/Receiving Element. They will turn-in the film to DRMO for precious metals recovery.

5.16. Disposal of Aerosol Spray Paint, and Aerosol Lubricants. Latex and enamel aerosol paint cans, and aerosol lubricants made of petroleum distillates will be collected by Hazmat. The cans will be punctured with a can puncturer and the waste streams will be collected in separate drums for disposal. The empty cans will be recycled as scrap metal.

5.17. Lead Recycling.

5.17.1. Lead tire weights at Charleston AFB must be recycled as scrap metal (see [Attachment 32](#)). Generators of lead tire weights must collect the weights in a container labeled “Scrap metal – Lead,” and turn it into the scrap metal yard (Hazmat x4929 or x4930).

5.17.2. Lead from the firing range will be collected and recycled by a contractor (see [Attachment 33](#)). Under 40 CFR 261.4 (a)(13), scrap metal being recycled is not a solid waste, and therefore not a RCRA Hazardous Waste.

6. Hazardous Waste Training Requirements:

6.1. Personnel for which training is mandatory. Charleston Air Force Base (CAFB) personnel who perform any of the following tasks must receive hazardous waste management training:

All personnel who work with hazardous waste and their supervisors,

All personnel who decide which wastes are hazardous wastes,

All personnel who add hazardous waste into accumulation containers or tanks,

All personnel who remove hazardous waste from accumulation containers or tanks,

All personnel who transport hazardous waste to or from Accumulation Points,

All personnel who transport hazardous waste to or from storage (Hazardous Waste Storage Yard),

All personnel who respond to spills, fires, or explosions involving hazardous waste,

All personnel who complete hazardous waste manifests, annual reports, or exception reports,

All personnel who inspect hazardous waste Accumulation Points, and treatment, storage, or disposal (TSD) facilities,

All personnel who operate Accumulation Points,

All personnel who work at permitted TSD (Hazardous Waste Storage Yard), and

All personnel who conduct any tasks involving occupational exposure to or which require management of hazardous waste.

6.2. Training frequency. For new personnel, training must be successfully completed prior to their assignment to a position involving the handling or management of hazardous waste. Until that time, untrained personnel must not perform any tasks involving hazardous waste management unless they are supervised by trained personnel. Personnel must complete the training within six months of assignment and also complete annual refresher training.

6.3. Training Scope. There are two general components to the training required by RCRA in 40 CFR 265.16. Personnel must be trained how to perform their duties in a way that ensures CAFB compliance with hazardous waste regulations and how to respond to emergencies involving hazardous waste.

6.3.1. The training must cover at least the following topics: Introduction to the Resource Conservation and Recovery Act, Identification of Hazardous Waste, Accumulation Point Management, Container Use, Marking, and Labeling, On-base Transportation, Waste Turn-in Procedures, Manifesting and Transportation of Hazardous Waste, Spill Prevention and Emergency Response, Waste Reduction, Personnel Safety and Health, and Fire Safety.

6.4. Air Force Hazardous Waste Management Training Program. CAFB uses the Air Force Hazardous Waste Training Program and other material to train applicable base personnel. This program, which is geared to flight line, maintenance, and other AF personnel who generate hazardous waste, includes details on how to comply with federal and state hazardous waste management regulations.

6.5. CAFB Hazardous Waste Training Program. To fully comply with the regulations, CAFB has tailored its training program to meet the base's specific requirements including base-specific procedures for waste determination, accumulation, transportation, and turn-in. The CAFB program also includes the base's specific emergency response procedures.

6.6. Required Records. Training records are required to document that all appropriate personnel have successfully completed their required training. The following records should be maintained by the Environmental Manager (437 CES/CEV):

6.6.1. The job title for each position at the installation related to hazardous waste management and the name of the employee filling each job.

6.6.2. A written job description for each position related to hazardous waste management (see [Attachment 34](#)). For the purposes of RCRA training records, the job description need only describe the job as it relates to the management of hazardous waste and must include the requisite skills, education, or other qualifications, and the duties of facility personnel assigned to each position.

6.6.3. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position related to management of hazardous waste.

6.6.4. Records that document that the training or job experience required to meet the training requirements have been provided to and completed by base personnel. These records must be kept for current employees as long as they work at the installation, and for an additional three years after the date they leave the base (or stop working at a position related to hazardous waste management). Training records may accompany personnel transferred to another installation.

7. Response to Emergencies:

7.1. In the event of fire, explosion, or spill involving hazardous waste, the incident witness must immediately contact the CAFB Fire Department at ext. 911 to report the incident.

7.1.1. Contingency Plan for Waste Generating Activities (Accumulation Points). CAFB has a separate plan, Hazardous Materials Emergency Planning and Response Plan (*CHAS AFB OPLAN 32-1*), which fully addresses the contingency plan requirements of 40 CFR 264 Subparts C and D. The Plan is distributed to all base activities that generate hazardous waste. Emergency response activities relating to hazardous waste spills, fires, or explosions involving hazardous waste shall be in accordance with the Plan.

7.1.2. The Hazardous Materials Emergency Planning and Response Plan must be implemented whenever there is a hazardous waste spill, fire, explosion, or release of hazardous waste constituent that could threaten human health or the environment.

7.1.3. In the event of fire, explosion, or spill involving hazardous waste, the incident witness must immediately contact the CAFB Fire Department at ext. 911 to report the incident. Additional reporting may be necessary and will be determined by the Environmental Manager (437 CES/CEV).

7.2. Contingency Plan for Hazardous Waste Storage Facility (Hazardous Waste Storage Yard). 40 CFR 264 subparts C and D requires a Part B permitted storage facility to have a contingency plan for the facility. Emergency response activities relating to hazardous waste spills, fires, or explosions involving hazardous waste at the Hazardous Waste Storage Yard shall be in accordance with the current CAFB Contingency Plan contained in the Hazardous Materials Emergency Planning and Response Plan.

7.3. Hurricane Checklist. The Part B Permitted Treatment, Storage, and Disposal (TSD) Facility and Hazardous Waste Accumulation Point hurricane checklist is provided in [Attachment 35](#).

7.4. Hazardous Material/ Hazardous Waste Security Plan. [Attachment 36](#) provides procedures to ensure hazardous materials/ wastes do not fall into the wrong hands.

8. Preparedness and Spill Prevention:

8.1. Program Requirements. Organizations and activities that generate, store, or dispose of hazardous waste must be managed and operated in a way that is protective of human health and the environment. Also, they must minimize the possibility of a fire, explosion, or release of hazardous waste. There are three preparedness and prevention requirements designated in the RCRA regulations to meet this requirement: 1) Generating activities as well as treatment, storage, and disposal (TSD) facilities must maintain certain emergency equipment on base to facilitate remediation efforts and to protect human health 2) the emergency equipment must be inspected periodically 3) Arrangements must be made with installation organizations and local authorities who might be called upon to provide emergency assis-

tance. CAFB has a plan, the Spill Prevention Control and Countermeasure Plan, which address these requirements.

8.2. Required Equipment. Each of the Accumulation Points and the Hazardous Waste Storage Yard must be equipped with the emergency equipment listed below. This equipment must be close enough to the hazardous waste area to make it convenient and easy to get to in the event of an emergency. Do not place equipment so close that it cannot be approached or could be damaged in the event of a spill or fire. The location of emergency equipment in the Hazardous Waste Storage Yard is identified in [Attachment 21](#).

8.2.1. Communication Equipment and Alarm Systems.

8.2.1.1. Areas used for hazardous waste accumulation, treatment, storage, or disposal must be equipped with a device capable of summoning emergency assistance from emergency responders. Examples of such a device include a telephone available in the area where hazardous waste are handled or a two-way radio.

8.2.1.2. An internal communications or alarm system capable of providing immediate emergency instructions to installation personnel who can be affected by an emergency incident must be in place at or near the area in which hazardous waste is handled. The determination of what type of communications or alarm system to install is location specific. Consequently, the decision of whether to use a system that can provide voice instruction (such as a public address system) or one that sounds a signal (such as a bell or a horn) is left to the installation.

8.2.1.3. Whenever hazardous waste is being handled, the person involved in the hazardous waste handling operation must have immediate access to the communications or alarm system. If more than one person is in the area when the waste is being handled, all personnel must have either direct access to the system or access through visual or voice contact with another person.

8.2.2. Fire Suppression Equipment.

8.2.2.1. Areas in which flammable or combustible hazardous waste is handled must be equipped with fire control equipment. This includes items such as fire extinguishers, stationary extinguishing equipment that dispenses foam, inert gas, or dry chemicals.

8.2.2.2. If water is necessary to operate fire suppression equipment, there must be water available at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

8.2.3. Spill Control Equipment.

8.2.3.1. The type and amount of spill control equipment placed near a hazardous waste handling area depends on the type and amount of hazardous waste in the area as well as its location. Solid, granular absorbent such as clay or vermiculite or commercially available absorbent pads or pillows would act as a suitable absorbent for liquid hazardous waste. If the liquid is corrosive, a type of neutralizing absorbent would be necessary.

8.2.3.2. If the waste handling area is near a stream or a spill could potentially enter a stream or body of water, it would be beneficial to have spill control booms available to set in place to prevent or restrict the spread of hazardous waste across the surface of the water. Hazardous waste handled in areas with floor drains necessitates a drain covering or plug to be on hand to

prevent the waste from running into the drain.

8.2.4. Decontamination Equipment.

8.2.4.1. The type of decontamination equipment required to be available near a hazardous waste handling area depends on the type of waste in the area and the types of equipment that may need to be decontaminated after responding to an emergency. In instances where personal protective equipment such as gloves, boots, and aprons, and spill response equipment such as brooms, shovels, and dustpans require decontamination, a hose that delivers a steady stream of water may accomplish adequate decontamination. Where waste residues prove more difficult to remove, such as contaminated soil hardened in bucket of a backhoe, a scrub brush and a concentrated cleaning solution or steam generating equipment may be necessary for effective decontamination.

8.3. Equipment testing and maintenance.

8.3.1. All installation communications or alarm systems, fire protection equipment, spill control equipment, and decontamination that has been determined to be necessary at a hazardous waste handling area must be tested and maintained as frequently as is necessary to assure its proper operation in the event of an emergency. A periodic inspection schedule should be established and inspections documented.

9. Pollution Prevention:

9.1. Pollution Prevention Program. Charleston AFB has prepared a Pollution Prevention (P²) Management Action Plan (P²MAP) that consists of individual plans for each USAF objective including supporting information, which presents the most cost-effective means for meeting USAF reduction goals. The plan is set in place to ensure that all programs are progressing toward USAF goals and to track projects and metrics together using one procedure. This will allow programmatic issues to be addressed as they arise and it will allow funding to be arranged for projects deemed necessary to fulfill USAF compliance and P² goals.

9.2. Scope of the P² Program

9.2.1. The P² Program is maintained in accordance with AFI 32-7080, *Pollution Prevention Program*. According to the P² Program, generation of hazardous substances, pollutants, or contaminants should be reduced or eliminated at the source. Wastes that cannot be prevented at the source will be recycled in an environmentally safe manner. As a last resort, disposal will be employed through contracted sources or the Defense Reuse and Marketing Organization (DRMO), ensuring compliance with all applicable regulatory requirements.

9.2.1.1. The P² Program is managed by CEV and has the following responsibilities: develop/update the P²MAP, implement P² awareness training, insert P² contract language to cover environmental issues, plan Base wide P² activities, manage Municipal Solid Waste (MSW) Reduction and Use of Recycled Products programs, maintain the Pollution Prevention Program Objective Memorandum (POM), which is an outyear financial plan for P² funding requirements, ensure P² projects funds are obligated, cross-feed information base wide that may aid in P² efforts, interface with other installations, industry, and the research, development and technology community to acquire information on P² initiatives applicable to Base industrial operations, manage and report data for CAFB and command metrics on EPA-17 reductions, ODS reductions, MSW reductions, and purchase/use of recycled products, and

implement the Affirmative Procurement Program.

9.2.2. The P² Program is managed through the P² Working Group (PPWG) which is attended base wide by individuals working as a team to promote waste minimization, recycling, and information exchange efforts. The PPWG is responsible for supporting the EPC in implementing and managing the Pollution Prevention Program.

9.2.2.1. The EPC PPWG will implement the following items/topics: brief the Vice Wing Commander quarterly during EPC meetings on issues dealing with hazardous material/waste minimization, including volumes generated, reductions achieved, explanation for fluctuations, and additional program resource requirements to achieve goals, industrial maintenance and clean-up operations involving hazardous and other special wastes, municipal solid waste reduction, non-point source pollution and storm water management, material procurement, supply, and distribution, including operation of the Hazardous Material (HAZMART) Pharmacy, education, training, media distribution, and other incentive programs, systems acquisition and other pollution prevention projects, allied programs associated with pollution prevention, including comprehensive planning, energy and transportation efficiency, and natural resources value.

10. Closure Plan for Hazardous Waste Storage Yard:

10.1. Closure Plan Performance Standard. This closure plan includes the procedures necessary to close the hazardous waste storage yard at the conclusion of its operational life. These procedures are designed to ensure that the facility at Charleston Air Force Base is closed in such a manner that protects human health and the environment.

10.1.1. All organizations and sites identified in the distribution list to the Hazardous Waste Management Plan (HWMP) will maintain a current copy of the approved closure plan and all revisions, henceforth, and will continue to do so until the certification of closure has been submitted and accepted by the South Carolina Department of Health and Environmental Control (SCDHEC).

10.1.2. Revisions will be made to the closure plan by the Environmental Flight (437 CES/CEV) whenever relevant modifications are made to the existing equipment, structures, instruments, closure schedules or procedures related to the management of the hazardous waste storage yard. The amended closure plan and a written request for a permit modification will be submitted to SCDHEC for approval 60 days prior to the proposed change in the facility design or operation, and no later than 60 days after an unexpected event occurred which has affected the Closure Plan. If the event occurs during the closure period, the Base will request a permit modification no later than 30 days after the unexpected event. The closure plan will be also be reviewed and if necessary updated annually with the rest of the HWMP. Revisions to the Closure Plan will be sent by CEV to all organizations and sites identified in the distribution list to the HWMP.

10.2. Closure Procedures. These procedures specify the removal of all hazardous waste, equipment, and contamination from the hazardous waste storage yard. As such, the procedures, when completed, satisfy clean closure criteria and eliminate the requirement for a post-closure plan. Throughout the closure process, all run-on and run-off will be controlled by the secondary containment measures already in place at the hazardous waste storage yard. All storage areas in the yard are covered to prevent run-on from precipitation.

10.2.1. Maximum Waste Inventory. During active operations, the maximum possible volume of hazardous waste stored at the facility is as follows: 214 55-gallon drums (11,770 gallons), stored in containers as follows: 32 55-gallon drums (1,760 gallons) each at pads A, B, C, D, and E, 22 drums (1210 gallons) of solid waste materials at pad G, and 32 55-gallon drums (1,760 gallons) at pad F.

10.2.2. Waste Removal. The first step in the procedure to close the hazardous waste storage yard is to remove all hazardous waste being stored. All hazardous wastes stored at the facility will be properly packaged, labeled, and prepared for shipment and subsequent off-site disposal. Hazardous wastes will be sent to a permitted treatment, storage, or disposal facility (TSDF).

10.2.3. Container Closure. Section 5.12. details all the procedures for container management. All containers at the hazardous waste storage yard will be removed in accordance with the procedures in Section 10.2.2. CAFB does not maintain empty containers, which previously held waste, as hazardous waste.

10.2.4. Equipment Disposal/Decontamination. Decontamination will be performed as needed to minimize potential exposure of project personnel, the general public, and the environment to the contaminants associated with the hazardous waste management units. The decontamination procedures are also designed to minimize the potential for migration of contaminated material off-site.

10.2.4.1. Facility equipment, such as tools, forklifts, and pallets, that have been exposed to hazardous waste will initially be power washed with high-pressure steam or potable water, and detergents. After power washing, the equipment will be rinsed with potable water from the base system. Equipment cleaning will be conducted on the concrete pad of the storage facility to minimize runoff. This will allow any rinsate to be contained within the secondary containment area. A representative sample of the final rinsate will be collected and analyzed for the presence of hazardous constituents (and their degradation products) known to have been stored at the hazardous waste storage yard during its operational life. A sample of the potable water that was used to rinse the equipment will also be submitted to the laboratory for analysis. The appropriate sample collection procedures and analytical methods presented in Appendices I, II, and III of 40 CFR 261 will be used. The results of the rinsate analysis will be compared to the potable water results. Equipment will be considered cleaned when the results of the rinsate analyses are equal to or less than background, which will be determined from the results of the potable water analyses. Decontamination will continue until the results of the rinsate analyses are less than or equal to background levels.

10.2.4.2. Once the equipment has been cleaned, CAFB will decide if the equipment should be reused on Base, or turned in to the Defense Reutilization and Marketing Office (DRMO) for use by another facility, sold, or recycled.

10.2.4.3. The rinsate generated during equipment decontamination will be evaluated for EPA-listed wastes and tested to determine if it is characteristically hazardous per 40 CFR 261.11. Rinsate from equipment that has been contaminated with EPA-listed waste could carry the EPA-listing waste code. The evaluation will be based on records indicating what types of waste have been stored at the facility (i.e., review spill history to determine if the area decontaminated was exposed to EPA-listed wastes). The appropriate sample collection procedures and analytical methods presented in Appendices I, II, and III of 40 CFR 261 will be used. The results of these analyses will be used to determine the proper disposal for the rinsate. If neces-

sary, the rinsate will be transported and disposed of as a hazardous waste. If the rinsate is non-hazardous, it will be disposed of as a non-hazardous industrial waste.

10.2.5. Storage Area Closure. The first step in this process will be a visual inspection of the entire hazardous waste storage area (pads and secondary containment system) by an independent, registered Professional Engineer. The inspector will make note of any stains on the concrete, and cracks or other characteristics in the concrete that may indicate the integrity of the containment system is questionable. This inspection will also include a document review to identify areas in the storage facility where spills may have occurred during the facility's operational life. The specific measures taken to close the storage area will depend on the results of these inspections.

10.2.5.1. After completing the visual inspection, all stains present on the concrete pad's surface will be power washed with high-pressure steam or potable water, and detergents. After power washing the stains, the entire concrete pad will be power washed with high-pressure steam or potable water from the base system. All rinsate produced from power washing will be collected in the pad's secondary containment system, then pumped into 55-gallon drums. A representative sample of the final rinsate will be collected and analyzed for the presence of the hazardous waste constituents (and their degradation products) known to have been stored at the hazardous waste storage yard during its operational life, including all wastes identified in the Part A of the application. A sample of the potable water that was used for rinsing will also be submitted to the laboratory for analysis. The appropriate sample collection procedures and analytical methods presented in Appendices I, II, and III of 40 CFR 261 will be used. The results of the rinsate analyses will be compared to the potable water results. A clean surface has been achieved when the results of the rinsate analyses are equal to or less than background, which will be determined from the results of the potable water analyses. Decontamination will continue until the results of the rinsate analyses are less than or equal to background levels. The rinsate generated during the closure of the storage area will be evaluated for hazardous characteristics, as described in Section 10.2.4., to determine proper disposal.

10.2.5.2. If any indications that the integrity of the concrete pad has been compromised are present (e.g., cracks in the concrete) and a release of hazardous waste has occurred, a detailed sampling plan will be developed and implemented. This plan will be site specific and at a minimum describe: sampling locations, sample collection procedures, sample analysis procedures, location and justification for background sampling sites, and an estimated schedule for sampling and analysis (SCDHEC will be provided a proposed closure schedule). If the analyses reveal that action levels, which will be developed at the time of closure and proposed in the Sampling Plan, are exceeded, then CEV will decide the appropriate course of action based on the available information. Treatment alternatives to be assessed include in situ treatment, ex situ treatment, or disposal. If disposal is employed, CAFB will ensure that the contaminated soil and concrete is properly handled, labeled, and transported to a properly licensed TSDF.

10.3. Verification of Closure Performance Standard. Once all hazardous waste has been properly shipped off-site and all remaining equipment, containers, structures, and other hazardous waste management units have been cleaned or disposed of, the following measures will be taken to ensure that the closure performance standard has been met. All measures taken in Section 10.2. during the closure activities will be documented and reports maintained at the facility.

10.3.1. Soil Contamination. Soil samples will only be collected if the integrity of the concrete pad has been compromised and a release of hazardous waste has been documented in the unit. If soil

samples are collected, the appropriate sample collection procedures and analytical methods presented in Appendices I, II, and III of 40 CFR 261 will be used. To demonstrate clean closure of the facility, soil samples, if taken, will be analyzed for the presence of the hazardous waste constituents (and their degradation products) known to have been stored at the hazardous waste storage yard during its operational life, including all wastes identified in the Part A of the application. Soil sample results will be compared to action levels that will be developed at the time of closure and proposed in the Sampling Plan.

10.3.2. Groundwater Contamination. Groundwater monitoring wells are already in place around the storage facility. Samples will only be collected and analyzed for the presence of selected hazardous waste constituents if the underlying soil has been found to exceed action levels, which will be developed at the time of closure and proposed in the Sampling Plan. If groundwater samples are taken, the appropriate sample collection procedures and analytical methods presented in 40 CFR 261, Appendices I, II, and III, will be used.

10.3.2.1. If necessary, to demonstrate clean closure of the facility, groundwater samples that are taken will be analyzed for the presence of the hazardous waste constituents (and their degradation products) known to have been stored at the hazardous waste storage yard during its operational life, including all wastes identified in the Part A of the application. The groundwater sample results will be compared to action levels, which will be developed at the time of closure and proposed in a Sampling Plan.

10.4. Run-on/Runoff Control. Throughout the closure process, all run-on and runoff will be controlled by the secondary containment measures already in place at the storage facility.

10.5. Closure Schedule. At this time, no plans have been made to close the hazardous waste storage yard. It is estimated that the hazardous waste storage yard will be fully operational until at least 2050 AD. When the storage site is slated for closure, the schedule presented in Attachment 38 will be followed.

10.6. Notification Procedures and Timeframes. CAFB will notify SCDHEC in writing at least 45 days before closure activities will begin for the hazardous waste storage yard per 40 CFR 264.112(d)(1). Within 90 days of receiving the final volume of hazardous wastes, all hazardous wastes will be removed from the hazardous waste storage yard per 40 CFR 264.113(a). All closure activities will be completed within 180 days from receipt of the final volume of hazardous wastes per 40 CFR 264.113(b). Within 60 days of the completion of final closure of the hazardous waste storage yard, CAFB will submit to the SCDHEC, by registered mail, a certification that the facility has been closed in accordance with the specifications of the approved closure plan (40 CFR 264.115). The certification will be signed by the facility operator and an independent, registered professional engineer.

ROWAYNE A. SCHATZ, Colonel, USAF
Commander

Attachment 1**GLOSSARY OR REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 32-7002, *Environmental Information Management Systems*

AFI 32-7005, *Environmental Protection Committees*

AFI 32-7042, *Solid and Hazardous Waste Compliance*

AFI 32-7045, *Environmental Compliance Assessment and Management Program*

AFI 32-7080, *Pollution Prevention Program*

AFI 32-7086, *Hazardous Materials Management*

AFP 32-7043, *Hazardous Waste Management Guide*

29 CFR Parts 1900-1910, *Labor*

40 CFR Parts 260-299, *Protection of Environment*

49 CFR Parts 100-177, *Transportation*

HQ USAF/IL Memo, dated 2 Nov 1998, *DOD Policy to Implement the EPA's Military Munitions Rule*

CAFBI 32-7086, *Hazardous Materials Management Plan*

437 AW OPlan 32-1, *Hazardous Materials Emergency Planning and Response Plan*

CAFB SPCC Plan, *Charleston AFB Spill Prevention, Control, and Countermeasures Plan*

EOD Operating Instruction 32-3005, *Explosive Ordnance Disposal Program*

Abbreviations and Acronyms

AF-EMIS—Air Force Environmental Management Information System

CFR—Code of Federal Regulations

DOT—U.S. Department of Transportation

DRMO—Defense Reutilization and Marketing

ECAMP—Environmental Compliance Assessment and Management Program

EMIS—Environmental Management Information System

EPA—U.S. Environmental Protection Agency

EPC—Environmental Protection Committee

FP—Flash Point

Haz Com—Hazard Communication

HM—Hazardous Material

HMIRS—Hazardous Materials Information Resource System

HW—Hazardous Waste

HWMP—Hazardous Waste Management Plan

HWY—Hazardous Waste Storage Yard

MSDS—Material Safety Data Sheet

NA—North American Number

NOV—Notice of Violation

NR—Non-Regulated

NSN—National Stock Number

PCB—Polychlorinated Biphenyl

PPM—Parts Per Million

PSN—Proper Shipping Name

RCRA—Resource Conservation and Recovery Act of 1976

RQ—Reportable Quantity

SCDHEC—South Carolina Department of Health and Environmental Control

SCWSN—South Carolina Waste Stream Numbers

TCLP—Toxicity Characteristic Leaching Procedure

TID—Turn-in Document

TSD—Treatment, Storage, and Disposal

UN—United Nations Number

UW—Universal Waste

Terms

Accumulation Point (Initial)—A collection point located at, or near, the point of waste generation where wastes are initially accumulated. The area must be under the control of the operator of the process generating the waste. The operator should be near the area often enough to detect a leak within a reasonable time frame. A maximum of 55 gallons per waste stream of HW or one quart of acutely HW may be accumulated at an initial accumulation point. When this amount is accumulated, it must be moved to the Hazardous Waste Storage Yard within 72 hours. Storage time limits do not apply to initial accumulation points.

Accumulation Site—A provision of 40 CFR 262, Subpart C which allows storage of hazardous wastes for a period of up to 90 days without a storage permit, or without having interim status. Typically, the sites are distant from the activities and subject to additional inspection and containment requirements in Subparts J and I of 40 CFR 265.

Accumulation Start Date—A maximum of 55 gallons of HW may be accumulated at an initial accumulation point. When accumulations of hazardous waste reach this amount, the generator must mark the container holding the accumulated hazardous waste with the date. For all CAFB Accumulation Points, the Accumulation Start Date is the date the 55 gallon storage drum becomes full; this date must be

recorded on the full drum.

Air Force Environmental Management Information System (AF-EMIS or EMIS)—The Air Force's automated data system designed to manage the Air Force Hazardous Materials Pharmacy Program. The purpose of the AF-EMIS is to minimize the purchase, storage, use, and disposal of hazardous materials. AF-EMIS is designed to document and track the many factors that must be considered before introducing any hazardous material into the workplace: employee training, health, safety, labeling, materials substitutions, and disposal. Proper use of AF-EMIS will allow the Air Force to control costs, reduce liability, improve worker safety and improve the quality of the environment.

Characteristic Waste—A waste with any characteristic listed in 40 CFR 261, Subpart C (for example, ignitability, corrosivity, toxicity, or reactivity).

Code of Federal Regulations (CFR)—Published annually by the Office of the Federal Register, National Archives, and Records Administration, as a special edition of the Federal Register.

Combustible Liquid—Per 29 CFR 1910.106 (a), any liquid having a flash point at or above 100 °F. DOT definition per 49 CFR 173.120, any liquid that does not meet the definition of any other hazard class and has a flash point above 141 °F and below 200 °F. See 49 CFR for a complete definition.

Corrosivity—A solid waste exhibits this characteristic if a representative sample of the waste has either of the following properties:

It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using an EPA or EPA-accepted test method, or

It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the EPA- specified test method.

A waste that exhibits this characteristic has an EPA Waste Code of D002. See 40 CFR 261.22.

U.S. Department of Transportation (DOT)—The federal organization responsible for transportation regulations for hazardous and non-hazardous wastes. DOT regulations govern the type of container marking, labeling, and placarding requirements for transporting hazardous materials/wastes. Regulations for transportation of hazardous materials/wastes are contained in 49 CFR Part 171 and 172.

Defense Reutilization and Marketing Office (DRMO)—The federal organization responsible for coordinating the physical removal of PCB items and hazardous wastes from CAFB.

Environmental Compliance Assessment and Management Program (ECAMP)—A program designed to determine whether or not an installation is meeting environmental compliance requirements and aid in managing potential compliance shortfalls. It will give the installation commander a "snapshot in time" of how the installation is meeting the environmental compliance requirements. The program guidance is issued by Air Staff, and requires annual assessments with teams both internal and external to the installation. Once issued, the final report is releasable to the public.

Empty Container —A container is empty by the following definitions and is not subject to regulation under parts 261-265, or 268, 270, or 124 of 40 CFR if:

1) A container (or an inner liner removed from a container) that has held any hazardous waste, except a waste that is a compressed gas or an acute hazardous waste listed in 261.31-.33(e), is empty if the following conditions exist:

All wastes have been removed using practices commonly employed to remove materials from that type of container (e.g., pouring, pumping, and aspirating), and

No more than 2.5 centimeters (1 inch) of residue remain on the bottom of the container or inner liner, or

No more than 3 percent by weight of the total capacity of a container may remain if the container is less than or equal to 110 gallons in size, or

No more than 0.3 percent by weight of the total capacity for containers greater than 110 gallons in size.

2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container is equal to atmospheric pressure.

3) A container or inner liner that held an acute hazardous waste (identified in 40 CFR 261) is empty if it has been triple rinsed using a solvent capable of removing the chemical.

Environmental Protection Committee (EPC)—An inter-disciplinary committee at the base, MAJCOM, or Air Staff tasked with assuring that the Air Force achieves and complies with all required environmental compliance issues and projects future requirements in a pro-active stance in regards to environmental management. Committee members include the installation commanders, operations, maintenance, resource management (transportation, supply, fuels, finances), civil engineering, public affairs, judge advocate and bio-environmental engineering. The committees and their requirements are covered by AFI 32-7005.

U.S. Environmental Protection Agency (EPA)—The federal organization responsible for the development and enforcement of laws and regulations concerning PCB items and hazardous wastes.

EPA Waste Code—An EPA hazardous waste number listed in 40 CFR 261, Subpart C (characteristic waste) or Subpart D (listed waste).

Flammable Liquid—Per 29 CFR 1910.106 (a), any liquid having a flash point below 100 °F. DOT definition, per 49 CFR 173.120, a liquid with a flash point of not more than 141 °F (i.e., less than or equal to 141 °F). CAFB should consider any liquid with a flash point less than or equal to 141 °F to be a flammable liquid. See 49 CFR for a complete definition.

Flash Point (FP)—The minimum temperature of a flammable liquid at which it gives off enough vapor to form an ignitable mixture with air near the surface of the liquid.

Generator—A person or a site, whose act or process produces hazardous waste or whose act first subjects hazardous waste to regulation. EPA and State environmental regulatory agencies typically consider the Air Force installation as the generator.

Hazard Class—A hazardous material is any substance or material that has been determined by the DOT to be capable of posing an unreasonable risk to health, safety, and property when transported and that has been so designated. Each hazardous material is placed into one or more of eight possible hazard classes and 15 subclasses under DOT regulations, e.g. Class 3 is Flammable liquids, Class 8 is Corrosives.

Hazard Communication (Haz Com) Standard—A Federal Occupational Safety and Health Administration (OSHA) requirement, 29 CFR 1910.120, that requires labeling and MSDSs so employees know materials are hazardous.

Hazardous Material (HM)—Any material that meets the following conditions:

Has not become a waste, and has been determined by the DOT to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated in 49 CFR 172.101, Hazardous Materials Table.

Hazardous Materials Information Resource System (HMIRS)—A data base which has MSDS information on hazardous materials procured by the Air Force. The HMIRS is available online at <http://www.dlis.dla.mil/hmirs>.

Hazardous Waste (HW)—Any material that is reactive, corrosive, ignitable, toxic, or published in the Hazardous Waste Listing (40 CFR or R.61-79 261, Subpart D). Radioactive waste is regulated under separate guidance. Aqueous Film - Forming Foam (AFFF), used by Fire Protection (437 CES/CEF) to fight fires, is not hazardous but will be treated as a hazardous waste due to its high chemical oxygen demand which is very toxic to aquatic life. Generally, on Base, most chemicals, paints (oil-based, enamel, epoxy), spent thinners, sludges, and residues are hazardous waste unless they are either accepted for sale by DRMO, recycled, reused, or reclaimed. All shipments of hazardous waste off base must be manifested whether or not they are processed through DRMO.

Hazardous Waste Characterization—The identification, description, and quantification of a hazardous waste stream.

Hazardous Waste Management Plan (HWMP)—An installation-developed document which provides guidance to base personnel who work with hazardous waste, and sets local management procedures for managing hazardous waste and preventing pollution.

Hazardous Waste Profile Sheet—A document (Form 65 or DRMS Form 1930) that describes the physical and chemical properties of HW. It also provides information such as the Proper DOT Shipping Name, UN or NA Number, and the EPA Waste Number(s), which is required to be recorded on Hazardous Waste Labels.

Hazardous Waste Storage Yard (HWY)—The hazardous waste storage site (Bldg. 691) to which accumulated wastes are taken before shipment to an off-base disposal facility through DRMO. Hazardous wastes can be stored in the Hazardous Waste Storage Yard for up to one year from the Accumulation Start Date.

Ignitable—A waste exhibits the characteristic of ignitability if it is a liquid and has a flash point less than 140 °F. A solid waste that exhibits this characteristic has an EPA Waste Code of D001. See 40 CFR 262.21 for a complete definition.

Incompatible—A hazardous waste which is unsuitable for the following:

- 1) Placement in a particular device or facility because it may cause corrosion or decay of contaminated materials, such as drums, containers, inner liners, or tank walls.
- 2) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion violent reaction, toxic flammable fumes or gases.

Listed Hazardous Waste—A listing of wastes identified by EPA in 40 CFR 261, Subpart D as hazardous based upon the properties of the waste. The EPA has established four lists based on the criteria for listing a hazardous waste. Two of the lists are for materials that have been used in a process, and two are for commercial chemical products that are to be discarded. "F" list wastes (40 CFR 261.31) are materials that

have become a waste as a result of being used in a process; the processes and the type of use are very broad, and therefore considered to be "non-specific". "K" list wastes (40 CFR 261.32) are from specific sources such as wood preservation, petroleum refining, etc.; by definition these materials are hazardous waste and no further analysis is required for the purpose of making the hazardous waste determination. "P" list wastes (40 CFR 261.33) are discarded commercial chemical products, off-specification materials, container residues, and spill residues that are acutely hazardous. "U" list wastes (40 CFR 262.33) are discarded commercial chemical products, off-specification materials, container residues, and spill residues that are toxic. "P" and "U" list wastes have not been mixed with other hazardous or toxic materials and have not been used in any process. The only difference between the "P" and "U" lists is that "P" list wastes are considered acutely hazardous. The chemicals listed in the "P" or "U" lists are not considered hazardous wastes unless they are discarded or are unfit for their original intended use. Waste generators should always choose the most specific waste number when making a hazardous waste determination.

Manifest—HW shipping document required by Federal or State regulatory agencies for transportation of HW. Manifests that the installation commander or a named representative signs to track HW to a permitted or interim status treatment, storage, or disposal facility. Refer to 40 CFR 262, Subpart B.

Material Safety Data Sheet (MSDS)—A document containing the data required by, and prepared in accordance with FED STD 313, to communicate to the user of the chemical, physical, and hazardous properties of the material. To obtain an MSDS, call Bioenvironmental Engineering and provide the NSN and name of manufacturer.

National Stock Number (NSN)—A 13 digit number comprised of the Facility Code (FSC) and the National Identification Number (NIIN). NSNs are usually located on the MSDS.

Non-RCRA or Non-Regulated (NR)—CAFB does accumulate wastes that are not hazardous, such as used oils, oily rags, etc. Profiles are developed for these Non-RCRA wastes which are also stored in the Hazardous Waste Storage Yard and disposed of through a DRMO contractor.

Notice of Violation (NOV)—A formal legal notice from local, state, or federal regulatory authorities that informs the installation, agency, or function that it has violated applicable laws or regulations. These notices require considerable effort to resolve and usually draw considerable media attention. Ignoring NOV's can be the first step in beginning criminal and civil liability lawsuits. NOV's are required to be reported as part of the base's EPC minutes.

Parts per million (ppm)—Units of concentration expressed as Parts per Million. Used to indicate the concentration of a particular substance in a liquid or solid. A ppm is equal to a mg/l (milligram per liter). For example, a ppm is approximately 4 drops in a 55-gallon drum.

PCB Item—A transformer, capacitor, fluorescent light ballasts, or other item containing PCBs.

PH—Term used to express the apparent acidity or alkalinity of aqueous solutions; values below 7 indicate acid solutions and values above 7 indicate alkaline solutions.

Polychlorinated Biphenyl (PCB)—Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contain such substance. Well-documented tests have shown PCBs to cause, among other things, reproductive failures, gastric disorders, skin lesions, and tumors in laboratory animals. Symptoms found in studies of workers exposed to PCBs are epidermal disorders, digestive disturbances, jaundice, impotence, throat and respiratory irritations and severe headaches. PCBs are not covered under the RCRA or classified as hazardous wastes,

although they are hazardous. EPA has kept them in a special separate category. EPA regulations governing PCBs are contained in 40 CFR Part 761.

Proper Shipping Name (PSN)—The DOT publishes a list of approximately 1700 "Proper Shipping Names" to be used in shipping hazardous materials. For every hazardous material/wastes to be shipped there is one best name that must be used. The proper shipping names are listed in the Hazardous Materials Transportation Table contained in 49 CFR 172.101.

Reactive—A solid waste exhibits this characteristic if a representative sample of the waste has any of the following properties:

- 1) It is normally unstable and readily undergoes violent change without detonating.
- 2) It reacts violently with water.
- 3) It forms potentially explosive mixtures with water.
- 4) When mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.
- 5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- 6) It is readily capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- 7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- 8) It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

A waste that exhibits this characteristic has an EPA Waste Code D003.

Reclaimed Material—A waste of known quality that does not meet the original specification, but which can meet another grade or specification for use in equipment or facilities without re-refining.

Recycled Material—A waste that does not meet a particular specification, but which through processing or refining, can be recovered for original and other uses. This includes both hazardous and non-hazardous wastes. The hazardous waste managers must ensure that recoverable wastes are segregated and not mixed with other wastes of no value. Petroleum products are critical and every effort must be made to ensure that they are not contaminated with hazardous wastes. If petroleum products are contaminated with hazardous wastes, they will not be accepted for recycling.

Reportable Quantity (RQ)—The quantity of a hazardous substance that triggers reports under CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of 1980). If a substance is released in amounts exceeding its RQ the release must be reported to the National Response Center, the SERC (State Emergency Response Commission), and community emergency coordinators for areas likely to be affected.

Resource Conservation and Recovery Act of 1976 (RCRA)—Public Law 94-580. A Federal law which mandates a cradle-to-grave system of managing hazardous waste. This law closed the circle of environmental protection by providing control over disposal of hazardous wastes on land. The Hazardous Waste Management Plan is a direct result of RCRA.

RCRA Hazardous Waste Treatment, Storage and Disposal Permit—A comprehensive permit issued by the authorized state and/or EPA to a TSD owner/operator. The permit includes technical and regulatory requirements necessary to operate the facility.

Record Keeping—The process of implementing and maintaining written and computer data that tracks hazardous wastes.

South Carolina Department of Health and Environmental Control (SCDHEC)—This state organization is EPA's South Carolina counterpart and is responsible for enforcing hazardous waste regulations. SCDHEC hazardous waste regulations are more stringent than those of EPA. SCDHEC does not enforce EPA PCB regulations; however, PCB enforcement at this time remains at the federal level. SCDHEC annually conducts no-notice inspections of CAFB Hazardous Waste Accumulation Points, Hazardous Waste Storage Yard and supporting documents such as training records, turn-in documents, manifests, hazardous waste profile sheets, etc.

Solid Waste—Any discarded material as defined in 40 CFR 261.2

South Carolina Waste Stream Numbers (SCWSN)—A sequential number assigned to each waste stream. Once a number is assigned to a waste stream, it can never be assigned to another waste stream. These numbers are used by 437 CES/CEV in computerized quarterly reports provided to SCDHEC.

Storer—Any base, business, plant, or other organization that stores hazardous waste before it is transported for disposal or disposed of on site. CAFB is a hazardous waste storer, but hazardous wastes are transported for disposal elsewhere through DRMO.

Toxicity Characteristic Leaching Procedure (TCLP)—A TCLP analysis of a waste tells a generator whether or not the waste is capable of releasing up to 8 toxic metals and 32 toxic organics in amounts that exceed the EPA regulatory limits when the waste is subjected to the kinds of chemical and physical conditions encountered in a landfill. The TCLP procedure simulates the conditions an industrial waste might encounter if it is disposed in a landfill. This procedure is designed to determine the mobility of specified contaminants present in solid and liquid wastes. An extract of the waste must be obtained by filtering it through a glass fiber filter. To formulate an extract for a solid waste, an extraction fluid equal to 20 times the weight of the solid phase is used. If an extract reveals contaminants in concentrations above the regulatory levels for that compound, then the waste is hazardous.

Toxicity—A waste exhibits the characteristic of toxicity if, using the TCLP test (40 CFR 261, Appendix II), the extract from a representative sample contains any of the contaminants listed in 40 CFR 262.24 at the concentration equal to or greater than the values listed. EPA Waste Codes are provided in the 40 CFR 261.24 (e.g., lead is D008, mercury is D009).

Transporter—An organization which transports hazardous waste on public roads. CAFB is not a transporter as long as base personnel transport hazardous waste only within base boundaries.

Treatment—The final step in the RCRA cradle-to-grave elimination of hazardous waste. Treatment can be incineration, burial, or other process. Any method, technique, or process (including neutralization) designed to change the physical, chemical, or biological character or composition of any hazardous waste to render it less hazardous or non-hazardous. CAFB does not treat hazardous waste and does not have permits to treat hazardous waste.

Treatment Storage and Disposal Facility (TSDF)—The acronym for a hazardous waste treatment, storage, and disposal facility.

Turn-in Document (CAFB Form 414 TID)—A form used by the Accumulation Point Crew Chief or other organization to turn-in HW to the Hazardous Waste Storage Yard. It identifies the generator and requires generator certification that the waste delivered has been correctly described.

Universal Waste (UW)—Any of the following hazardous wastes that are subject to the universal waste requirements of 40 CFR part 273:

- 1) Batteries as described in 40 CFR 273.2.
- 2) Pesticides as described in 40 CFR 273.3
- 3) Mercury Thermostats as described in 40 CFR 273.4
- 4) Lamps (Fluorescent bulbs) as described in 40 CFR 273.5

United Nations or North American (UN or NA) Number—A number assigned to each proper shipping name of a hazardous material/waste that is transported. The Emergency Response Guidebook identifies potential hazards and Emergency Actions for specific UN/NA Numbers.

Used Oil—Any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such, is contaminated by physical or chemical impurities. Used oil must not be mixed with other wastes and must never be mixed with or contaminated with hazardous wastes. If used oil is suspected of being contaminated with hazardous waste, contact 437 CES/CEV. Used oil, which is recycled off-site by being burned for energy recovery, is not regulated as a hazardous waste if used oil specifications (40 CFR 279.11, Table 1) are met.

Waste Minimization—Reducing the amount of hazardous waste that is generated.

Waste Segregation—The physical separation of wastes by waste type before packaging. Also, the separation of wastes into containers during storage and transportation.

Attachment 2

CHARLESTON AFB EMERGENCY REPORTING AND INFORMATION

Report On-Base Emergencies to Base Fire Department

Fires, explosions, or spills 911 (on base) 963-3777 (off base)

Emergency Medical Service 911

Emergency Assistance and Information

On-Base

Environmental Manager x4976

Bioenvironmental Engineer x2703

Ground Safety x5603

Security Forces x3600 or 2695

Public Affairs x5608

Contracting Officer x5170

Staff Judge Advocate x5502

AMC/CEV DSN 576-5764

HO Air Mobility Command

AMC Environmental Release Hotline DSN 576-2697

US EPA

Hazardous Waste Information Hotline (800) 424-9346

EPA Region IV DSN 797-1001

Federal, State, and Local Release Reporting

National Response Center (800) 424-8802

South Carolina Emergency Response Team (803) 734-0425

South Carolina Dept. of Health and Environmental Control 740-1590 - Duty Hours

24 Hour Emergency Response (803) 253-6488 - After Hours

SCDHEC Toll Free 1-888-481-0125

Charleston County Emergency Preparedness Division

740-6400 - Daytime

554-4700 - After Hours

US Coast Guard Regional Response Team

720-7733

Attachment 3

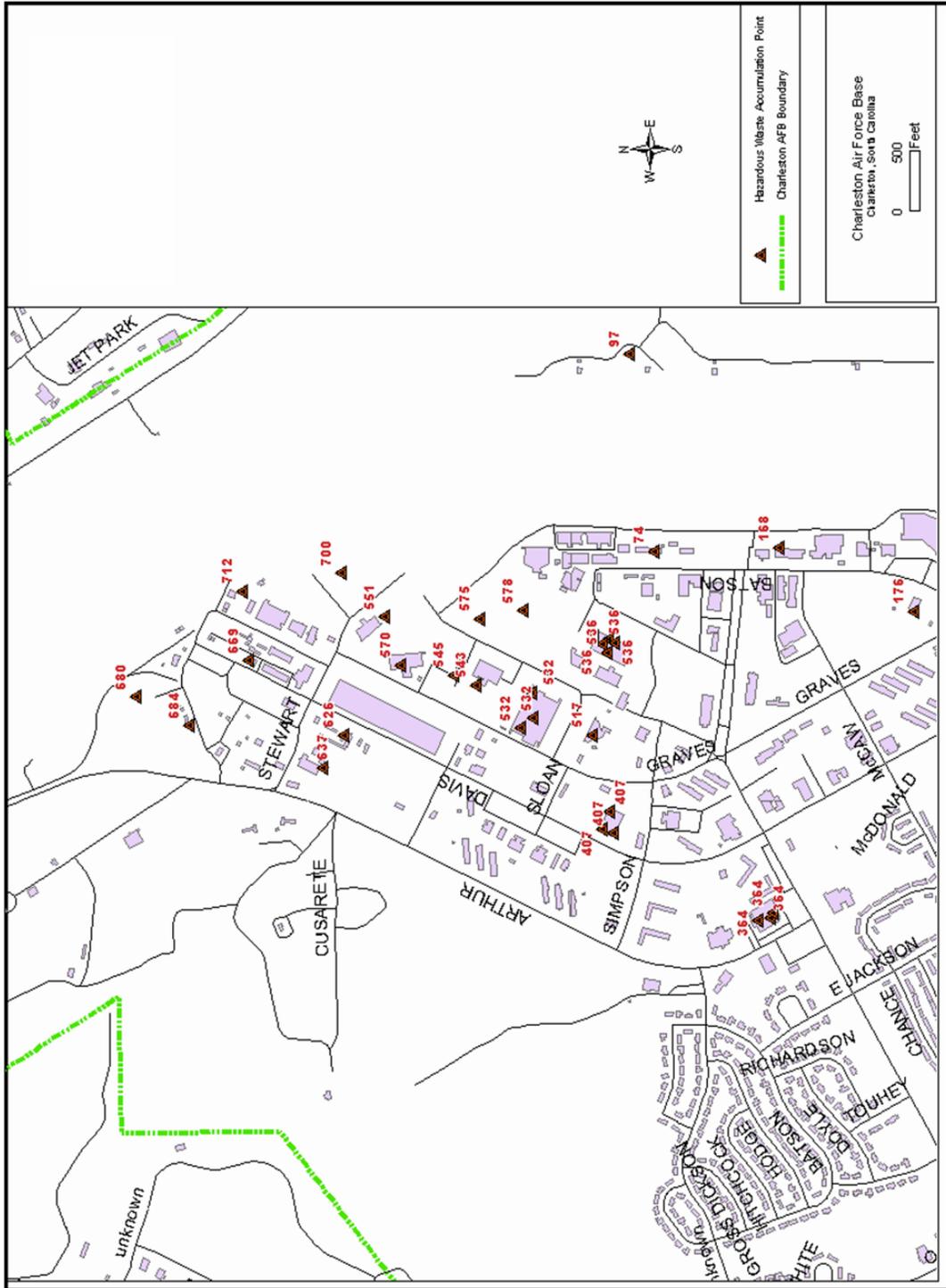
LIST OF HAZARDOUS WASTE ACCUMULATION POINTS

AP	OLD #	SHOP	BLD.
AP-1	AGS-2	F/L	74
AP-2	AGS-3	Rail	517
AP-3	MXS-1	Hyd	532
AP-4	MXS-2	SMCO	536
AP-5	MXS-3	HSC	700
AP-6	MXS-5	W/T	532
AP-7	MXS-7	C. Layout	536
AP-8	MXS-8	F. Cell	570
AP-9	MXS-9	Elen	58
AP-10	MXS-11	NDI	536
AP-11	MXS-13	AGE	548
AP-12	MXS-19	C. Sanding	532
AP-13	MXS-20	CCF	515
AP-14	MXS-21	Flotation	581
AP-15	LGS-1	Blk Fuel	684
AP-16	LGS-2	HYD (F/L)	680
AP-17	LGS-3	HYD (F/L)	96
AP-18	LGT-1	Refuel Mx.	688
AP-19	LGT-2	Allied Trade	407
AP-20	LGT-3	Vech. Mx	403
AP-21	LGT-4	463-L	176
AP-22	LGT-5	F. Dept	168
AP-23	SVS-1	Auto hobby	637
AP-24	B-1	MRC	543
AP-25	B-2	Test Cell	545
AP-26	B-3	Boeing	551
AP-27	B-4	Engine Se	544
AP-28	OSS	Life Support	506
AP-29	CES-2	Power Pro	714
AP-30	HAZMAT	HAZMAT	626
AP-31	MG-1	Dental	364

AP	OLD #	SHOP	BLD.
AP-32	MG-2	Dental	364
AP-33	MG-3	Pharm	364
AP-34	LGT	Allied Trade	403
AP-35	LGS-4	Supply	611

Attachment 4

MAP OF ACCUMULATION POINT LOCATIONS



Attachment 5

TYPICAL HAZARDOUS WASTE STREAMS

Typical Waste Streams

<u>Process</u>	<u>EPA Waste Codes (Note 1)</u>	<u>Profile Number</u>
Paint wastes		
Polyurethane paint residues	D007	H117
Paint Debris	D001 D007	H132
Plastic blast media	D006 D007	H041
Crushed paint containers	See note 2	N013
Polyurethane paint residues	D005 D006 D007 D035	H005
Waste Paint Sludge	D001 D005 D007 D008 D035	H043
Equipment Maintenance		
JP-8 fuel filters	D001	H060
JP-8 fuel filters	D001 D006	H036
Oil and hydraulic fluid filters	see note 2	N072
Diesel/ gasoline Mixture	D001 D018	H012
Spent antifreeze	D008	H094
Adhesives/sealants		
Cured sealant residues	D007	H049
Epoxy residues	D001 D007 D010	H027
Epoxy residues	D001	H038
Sealant residues	D001 D007	H039
Cured Sealant residues	D007 D035	H004

Typical Waste Streams

<u>Process</u>	<u>EPA Waste Codes (Note 1)</u>	<u>Profile Number</u>
Solvent/cleaning wipes		
Bearing wipe rags	D006 D007	H125

MEK/ JP-8 rags	F005	D001	D006	H113
----------------	------	------	------	------

Cleaning vats

PD680 distiller sludge	D006	D007	D008	H143
Alodine/alumibond	D006	D007		H116
Aluminum Cleaner (Brightener)	D002	D006	D007	H114

Aqueous Jet Washers

Jet wash water spill residues	D006	D007		H078
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X-ray/inspection processes

Magnetic inspection compound	D006			H063
Lead foil	D008			H062

Medical processes

X-ray film	See note 2			N097
Dental amalgam	D009			H031
Dental x-ray tabs	D008			H030

Spill Residues

Oil/hydraulic fluid spill residue	D006			H129
JP-8 spill residue	D001			H071
Hydraulic spill residue	D006			H121

Typical Waste Streams

<u>Process</u>	<u>EPA Waste Codes (Note 1)</u>	<u>Profile Number</u>
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Miscellaneous non-routine generated wastes

Broken mercury thermometers	D009		H177
Gas tank bottom waters	D001	D018	H008
Floor drain sludge	See note 2		N026
Oil sludge	D008		H028

Gasoline spill residue	D001 D018	H173
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Expired Shelf-life products

Epoxy resin	D010	M081
Acetone, technical	U002 D001	M083
Calcium hypochlorite	D001 D003	M051
1,1,1-Trichloroethane	U226	M050
Flammable liquids	D001 D035	M069
Ready mix joint compound	D009	M066
Epoxy adhesive	D001 D010	M065
Corrosion preventive compound	D005	M080
Rip-coat	D001	M063

Note 1 - The complete range of EPA waste codes generated is provided in Part A of the application.

Note 2 - These waste streams are provided as examples of waste streams that were tested and are not hazardous wastes.

Attachment 6

WASTE STREAM CHARACTERIZATION PROCESS DOCUMENT

Date _____

Waste Stream Characterization Process Document

(Generators/shops must initiate this document **annually** for all process waste streams)

1. Shops accumulate a process waste stream in containers and identify **specific items** that are placed in the container. Shops must notify CEV **when a representative sample can be obtained** and provide a copy of this document and an **MSDS** to CEV. For updates of existing waste streams, shops must add an MPA (Material Pending Analysis) label marked "Confirmatory Sample" in addition to labels required by the existing waste stream profile sheet. For new waste streams, only a completed MPA label is required on the drum. **MPA labels require a date**. For existing waste streams, the date this form is submitted to CEV is required on the label. For new waste streams, the date the first drop of waste goes into the drum is required on the MPA label.

2. CEV will provide a sample request to Bioenvironmental Engineering. Bio obtains a representative sample of the waste stream and sends the sample to lab for analysis.

3. CEV develops a waste profile based upon the waste stream identification/description provided by the shop and based upon the analytical lab data received from Bio.

4. Once a waste stream has been characterized/profiled, the **shops must ensure that only wastes identified on the profile sheet are placed in the container.**

If the waste stream changes for any reason, **the shop must notify CEV** so the waste stream profile can be revised/updated as needed, which may also require the waste stream to be resampled by Bioenvironmental Engineering.

Waste Stream Identification. Provide info and deliver to CEV (Bldg 247) or you may fax it to 673-2697.

Unit/Office Symbol _____ **Building No.** _____

Accumulation Point Designation _____ **Telephone** _____

Fax _____

Accumulation Point Manager/Crew Chief _____

Waste Name

Describe, in detail, the process generating the waste, where generated, etc.

e.g. Type of equipment being maintained/worked on, etc. chemicals involved, etc.

Estimated Amount Generated per year _____ (e.g. drums/year)

Please check one of the following:

- This is a new waste stream not previously sampled.
- This is an unused or expired shelf life product.
- This is an update sample of a current waste stream.

Current Profile Number _____

Date Last Sampled _____

Generators Estimate of Composition. Describe/ list what is in the drum.

Contents

Estimated % (Range)

(5-25 %, etc)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Certification: This is to certify that the waste stream is as described above.

Print Name/Grade

Signature

Date

Telephone

Provide copy of applicable MSDS(s)

File this record in the back of your accumulation point records (Tab F).

Attachment 8

SAMPLE AND ANALYSIS REQUEST

MEMORANDUM FOR 437 ADOS/SGGB
303 N. Davis Dr.
Charleston AFB, SC. 29404

FROM: 437 CES/CEV

1. Requested By:

2. I have requested the following be sampled:

Common Name of Material: _____

Waste Description:

Waste Generated By: _____ WSCP Doc. Date: _____

Location/Building: _____ Contact: _____ Tel: _____

Analysis Requested: [] TCLP FULL (1311) [] CORROSIVITY (pH) [] ASBESTOS
[] TCLP Pest/Herb (1311) [] FLASH POINT (1010) [] PCB
[] TCLP METALS (1311M) [] IGNITABILITY (1030) - SOLID [] OIL & GREASE
[] TCLP VOCs (1311V) [] REACTIVITY [] SILVER
[] TCLP SVOCs (1311SV) [] MAJOR COMPONENTS [] BTEX
[] ENERGY RECOVERY [] PAINT FILTER TEST [] TPH
[] TCLP NICKEL [] TOTAL NICKEL [] pH (Meter)
BIO, ARE THERE FREE LIQUIDS IN CONTAINER?: YES [] NO []
PROPER SHIPPING NAME: _____

SIGNATURE OF REQUESTER: _____

SAMPLING DATE: _____ ACCOMPLISHED: _____

SAMPLE NUMBER(S): _____

SAMPLE(S) WERE SENT TO: GENERAL ENGINEERING/ ARMSTRONG/ OTHER _____
(circle one)

DATE RESULTS RECEIVED: _____

ANALYSIS: _____

SIGNATURE OF CERTIFYING OFFICIAL: _____

FILE LOCATION: _____

Attachment 9

MAX CONCENTRATION FOR TOXICITY CHARACTERISTICS

EPA HW No. ¹	Contaminant	CAS No. ²	Regulatory Level (mg/L)	EPA HW No. ¹	Contaminant	CAS No. ²	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0	D032	Hexachlorobenzene	118-74-1	³ 0.13
D005	Barium	7440-39-3	100.0	D033	Hexachlorobutadiene	87-68-3	0.5
D018	Benzene	71-43-2	0.5	D034	Hexachloroethane	67-72-1	3.0
D006	Cadmium	7440-43-9	1.0	D008	Lead	7439-92-1	5.0
D019	Carbon tetrachloride	56-23-5	0.5	♦ RCRA—275 RDB—6704			
D020	Chlordane	57-74-9	0.03	D013	Lindane	58-89-9	0.4
D021	Chlorobenzene	108-90-7	100.0	D009	Mercury	7439-97-6	0.2
D022	Chloroform	67-66-3	6.0	♦ RCRA—211 RDB—6736			
D007	Chromium	7440-47-3	5.0	D014	Methoxychlor	72-43-5	10.0
♦ OSWER—101 RDB—5705				D035	Methyl ethyl ketone	78-93-3	200.0
D023	o-Cresol	95-48-7	⁴ 200.0	D036	Nitrobenzene	98-95-3	2.0
D024	m-Cresol	108-39-4	⁴ 200.0	D037	Pentachlorophenol	87-86-5	100.0
D025	p-Cresol	106-44-5	⁴ 200.0	D038	Pyridine	110-86-1	⁵ 5.0
D026	Cresol		⁴ 200.0	D010	Selenium	7782-49-2	1.0
D016	2,4-D	94-75-7	10.0	D011	Silver	7440-22-4	5.0
♦ OSWER—113				D039	Tetrachloroethylene	127-18-4	0.7
D027	1,4-Dichlorobenzene	106-46-7	7.5	D015	Toxaphene	8001-35-2	0.5
D028	1,2-Dichloroethane	107-06-2	0.5	D040	Trichloroethylene	79-01-6	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7	D041	2,4,5-Trichlorophenol	95-95-4	400.0
D030	2,4-Dinitrotoluene	121-14-2	³ 0.13	D042	2,4,6-Trichlorophenol	88-06-2	2.0
D012	Endrin	72-20-8	0.02	D017	2,4,5-TP (Silvex)	93-72-1	1.0
D031	Heptachlor (and its epoxide)	76-44-8	0.008	D043	Vinyl chloride	75-01-4	0.2

Attachment 10

SAMPLE INFORMATION LABEL

Sample Information	
Contents	_____
Date	_____
Sampled	_____
Sample ID	_____
Number	_____
Sampled	_____
By	_____
	<small>Printed Name</small>

Attachment 11

ANALYTICAL METHODS FOR LIQUID AND SOLID SAMPLES

Analyte	Method Number	Volume required by method	Typical Minimum Sample Volume ¹	Typical Container	Preservation ²	Holding Time
Ignitability	SW-846 1010/1020A	2 ml	50 ml ³	500 ml amber bottle	Cool to 4°C, protect from light (no headspace).	Analyze ASAP
Corrosivity	SW-846 9040B/1110	NA	50 ml ³	500 ml plastic or amber glass bottle	Cool to 4°C	Analyze ASAP
Reactivity - Cyanide/Sulfide	Section 7.3 of SW-846	50 ml	50 ml ³	500 ml amber bottle	Cool to 4°C	NA
TCLP Metals, except Mercury and Silver	SW-846 1311 ⁴ , 3010A/3015/3031, 6010B	200 ml	500 ml ³	500 ml plastic or glass bottle	None	6/6 months ⁵
TCLP Mercury	SW-846 1311 ⁴ , 7470	200 ml	500 ml ³	500 ml plastic or glass bottle	None	28/28 days ⁶
TCLP Silver	SW-846 1311 ⁴ , 3015/3031/3010A, 6010B Or 1311 ⁴ , 3040, 7760A	200 ml	500 ml ³	500 ml plastic or glass bottle	None	6/6 months ⁵
Total Metals, except Mercury and Silver	SW-846 3010A/3015/3031, 6010B	50 ml	500 ml ³	500 ml plastic or glass bottle	HNO ₃ to pH<2	6 months ⁷
Total Mercury	SW-846 7470	50 ml	500 ml ³	500 ml plastic or glass bottle	HNO ₃ to pH<2	28 days ⁶
Total Silver	SW-846 3010A, 3031/3015, 6010B or 3040, 7760A	50 ml	500 ml ³	500 ml plastic or glass bottle	HNO ₃ to pH<2	6 months ⁷

¹ For samples that are to be subjected to a matrix spike/matrix spike duplicate analysis, the volume required is tripled (e.g., 1 liter to 3 liters).

² Concentrated waste samples may not require preservation. Contact laboratory for the appropriate sample volume, preservation, and shipping information.

³ Samples requiring ignitability, corrosivity, and reactivity testing may be combined into 1-500 ml amber glass bottle.

⁴ SW-846 1311 is required only if the amount of solids in the sample is greater than 0.5%.

⁵ If graphite furnace or cold vapor analyses are to be performed on the same sample, then the combined minimum sample volume is 1000 ml.

⁶ Holding time is defined as the number of days (or months) from sample collection to leaching, and from the start of leaching to analysis.

⁷ Holding time is defined as the number of days from sample collection to analysis.

Analyte	Method Number	Volume required by method	Typical Minimum Sample Volume ¹	Typical Container	Preservation ²	Holding Time
TCLP Volatile organic compounds (VOC)	SW-846 1311 ¹ , 5030B, 8260B	25 g	120 ml	40 ml glass VOA vial; PTFE-lined septum	Cool to 4°C. No headspace	14/14 days ³
TCLP Semi-volatile organic compounds (SVOC)	SW-846 1311 ¹ , 3510C/3520C, 8270C	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C; protect from light	14/7/40 days ³
TCLP Pesticides	SW-846 1311 ¹ , 3510C/3520C/3535, 8081A	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C	14/7/40 days ³
TCLP Herbicides	SW-846 1311 ¹ , 8151A/8321	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C	14/7/40 days ³
VOC (Total)	SW-846 5030B, 8260B	5 ml	120 ml	40 ml glass VOA vial; PTFE-lined septum	Cool to 4°C; adjust pH<2 with H ₂ SO ₄ , HCl or solid NaHSO ₄ . Free chlorine must be removed prior to adjustment with the addition of Na ₂ S ₂ O ₅ . No headspace.	14 days ³
SVOC (Total)	SW-846 3510C/3520C, 8270C	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C; protect from light	7/40 days ³
Organochlorine Pesticides (Total)	SW-846 3510C/3520C, 8081A	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C	7/40 days ³
PCBs	SW-846 3510C/3520C, 8082	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C.	7/40 days ³
Organophosphorus Pesticides	SW-846 3510C, 8141A	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C	7/40 days ³
Herbicides (Total)	SW-846 8151A	1 L	2 L	1 Liter amber glass bottle, PTFE-lined cap	Cool to 4°C	7/40 days ³

¹ Holding time is defined as the number of days from sample collection to leaching, leaching to preparation, and preparation to analysis.
² Holding time is defined as the number of days from sample collection to preparation and preparation to analysis.

Analyte	Method Number	Volume required by method	Typical Minimum Sample Volume ¹	Typical Container	Preservation ²	Holding Time
Total Organic Carbon (TOC)	SW-846 9060	<1 ml	500 ml	500 ml amber glass bottle	Cool to 4°C; store in dark; adjust pH < 2 with H ₂ SO ₄ , HCl or solid NaHSO ₄ . Free chlorine must be removed prior to adjustment with the addition of Na ₂ S ₂ O ₃ .	28 days ³
Total Organic Halides (TOX) - Used Oil	SW-846 9020B	100 ml	200 ml	250 ml amber glass bottle, PTFE-lined cap	Cool to 4°C; adjust pH < 2 with H ₂ SO ₄ . No headspace. Protect from light.	28 days ^{3,10}
Total Suspended Solids (TSS)	EPA 160.2	100 ml	500 ml	1-500 ml plastic bottle	Cool to 4°C	7 days ³
Radioactivity - Gross alpha and beta	SW-846 9310	1 L	1 L	1-Liter plastic bottle	HNO ₃ to pH < 2	6 months ^{3,11}
Radioactivity - Alpha-emitting radium isotopes	SW-846 9315	1 L	1 L	1-Liter plastic bottle	HNO ₃ to pH < 2	6 months ^{3,11}
Radioactivity -- Radium-228	SW-846 9320	1 L	1 L	1-Liter plastic bottle	HNO ₃ to pH < 2	6 months ^{3,11}

¹⁰ If sample is not preserved with acid, it is to be analyzed within 2 hours of sample collection.

¹¹ If the sample is not preserved when collected, then it should be shipped unpreserved to the laboratory so that it is received within 5 days of sample collection. The sample is to be preserved by the laboratory upon receipt, then held in the original container for 16 hours prior to analysis.

Analyte	Method Number	Amount required by method	Typical Minimum Sample Volume ¹	Typical Container	Preservation	Holding Times
Reactivity - Cyanide/Sulfide	Section 7.3 of SW-846	50 ml	50 g	500 ml amber glass jar	Cool to 4°C	NA
TCPLP Metals, except Mercury and Silver	SW-846 1311, 3010A/3015/3031, 6010B	25 g	50 g	500 ml amber glass jar	None	6/6 months ²
TCPLP Mercury	SW-846 1311, 7470	25 g	50 g	500 ml glass jar	None	28/28 days ²
TCPLP Silver	SW-846 1311, 3010A/3015/3031, 6010B or 1311, 7760A	25 g	50 g	500 ml amber glass jar	None	6/6 months ²
Total Metals, except Mercury and Silver	SW-846 3050B/3051, 6010B	2 g	50 g	250 ml amber glass jar	None	6 months ²
Total Mercury	SW-846 7471A	1 g	50 g	250 ml glass jar	None	28 days ²
Total Silver	SW-846 3050B, 7760A or 3050B/3051, 6010B	2 g	50 g	250 ml glass jar	None	6 months ²
TCPLP VOC	SW-846 1311, 5030B, 8260B	25 g	50 g	125 ml wm glass jar or 3-40 ml VOA vials	Cool to 4°C	14/14 days ²
TCPLP SVOC	SW-846, 3510C/ 3520C, 8270C	25 g	150 g	250 ml wide mouth glass jar; PTFE-lined cap	Cool to 4°C	14/7/40 days ²
TCPLP Pesticides	SW-846 1311, 3510C/3520C/3535, 8081A	25 g	150 g	250 ml wide mouth glass jar; PTFE-lined cap	Cool to 4°C	14/7/40 days ²
Total VOC	SW-846 5035, 8260B	5 g	120 ml	125 ml wm glass jar or 3-40 ml VOA vials	Cool to 4°C	14 days ²

¹ For samples that are to be subjected to a matrix spike/matrix spike duplicate analysis, the volume required is doubled (e.g., 250 to 500 g).

² Holding time is defined as the number of days (or months) from sample collection to leaching, and from the start of leaching to analysis.

³ Holding time is defined as the number of days from sample collection to analysis.

⁴ Holding time is defined as the number of days from sample collection to leaching, start of leaching to preparation, start of preparation to analysis.

Analyte	Method Number	Amount required by method	Typical Minimum Sample Volume ³	Typical Container	Preservation	Holding Times
Total SVOC	SW-846 3540C, 8270C	30 g	150 g	250 ml wide mouth glass jar, PTFE-lined cap	Cool to 4°C	14/40 days ³
Total Pesticides	SW-846 3540C, 8081A	30 g	150 g	250 ml wide mouth glass jar, PTFE-lined cap	Cool to 4°C	14/40 days ³
Organophosphorus Pesticides	SW-846 3540C, 8141A	30 g	150 g	250 ml wide mouth glass jar, PTFE-lined cap	Cool to 4°C	14/40 days ³
PCBs	SW-846 3540C/3541, 8082	30 g	150 g	250 ml wide mouth glass jar, PTFE-lined cap	Cool to 4°C	14/40 days ³
Herbicides (Total)	SW-846 8151A	10 g	150 g	250 ml wide mouth glass jar, PTFE-lined cap	Cool to 4°C	14/40 days ³

³ Holding time is defined as the number of days from sample collection to preparation, and start of preparation to analysis.

Attachment 12**REPRESENTATIVE SAMPLE METHOD PROTOCOLS**

EXTREMELY VISCOUS LIQUIDS	ASTM STANDARD D140-70
CRUSHED OR POWDERED MATERIAL	ASTM STANDARD D346-75
SOIL OR ROCK-LIKE MATERIAL	ASTM STANDARD D420-69
SOIL-LIKE MATERIAL	ASTM STANDARD D1452-65
FLY ASH-LIKE MATERIAL	ASTM STANDARD D2234-76
CONTAINERIZED LIQUID WASTES	US EPA SW-846 COLIWASA PROCEDURE
LIQUID WASTES IN PITS, PONDS, LAGOONS AND SIMILAR RESERVOIRS	US EPA SW-846 POND SAMPLER

Attachment 13

HAZARDOUS WASTE LABEL

**HAZARDOUS
WASTE**

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

ACCUMULATION START DATE _____ E.P.A. WASTE NO. _____

D.O.T. PROPER SHIPPING NAME _____

AND _____

U.N. OR N.A. NO. _____

GENERATOR NAME CHARLESTON AIR FORCE BASE

ADDRESS 437th SPTG/CEV

CITY CHARLESTON AIR FORCE BASE STATE SC 29404

E.P.A. I.D. NO. SC3570024460 MANIFEST DOCUMENT NO. _____

**HAZARDOUS WASTE
HANDLE WITH CARE**

Attachment 15

COMPATIBILITY TABLES

The following is useful information for those with Flammable Lockers and Accumulation Points.

Hazardous Materials/Hazardous Waste Storage Incompatibility Chart

Substances in bold have detailed example lists on the next page.

If the material contains:	It may not be stored with any of the following:
Acid (pH below 2.0)	Caustics (pH above 12.5) Reactive Metals Alcohol Water Aldehydes Halogenated, Nitrated, or Unsaturated Hydrocarbons Reactive Organic Compounds and Solvents Spent Cyanide and Sulfide Solutions Oxidizers
Caustic (pH above 12.5)	Acid (pH below 2.0) Reactive Metals Alcohol Water Aldehydes Halogenated, Nitrated, or Unsaturated Hydrocarbons Reactive Organic Compounds and Solvents
Reactive Metals	Caustics Acids Alcohol Aldehydes Halogenated, Nitrated, or Unsaturated Hydrocarbons Reactive Organic Compounds and Solvents Oxidizers
Reactive Organic Compounds and Solvents	Caustics Acids Reactive Metals
Spent Cyanide and Sulfide Solutions	Acids
Oxidizers	Acetic or Other Organic Acids Concentrated Mineral Acids Reactive Metals Reactive Organic Compounds and Solvents Ignitable [Flammable/Combustible] Wastes*

* "Ignitable" in this context refers to substances with a flashpoint below 140° F, and includes:

Combustible substances, with a flashpoint below 140° F

Flammable substances, with a flashpoint below 100° F.

Some Deadly Combinations

Acids + Oil or Grease = Fire Flammable Liquids + Hydrogen Peroxide = Fire/Explosion

Acids + Caustics = Heat/Spattering Aluminum Powder + Ammonium Nitrate = Explosion

Caustics + Epoxies = Extreme Heats Sodium Cyanide + Sulfuric Acid = Lethal Hydrogen Cyanide

Chlorine Gas + Acetylene = Explosion Ammonia + Bleach = Noxious Fumes

Attachment 16

PROPERLY CLOSED DRUM LID



Attachment 17

DOT HAZARD CLASSIFICATIONS

HAZARD CLASS	DEFINITIONS
CLASS 1	EXPLOSIVES
CLASS 2	GASES
CLASS 3	FLAMMABLE LIQUIDS
CLASS 4	FLAMMABLE SOLIDS,
	SPONTANEOUSLY COMBUSTIBLE
	MATERIALS, AND MATERIALS THAT
	ARE DANGEROUS WHEN WET
CLASS 5	OXIDIZERS AND ORGANIC PEROXIDES
CLASS 6	POISONOUS AND INFECTIOUS MATERIALS
CLASS 7	RADIOACTIVE MATERIALS
CLASS 8	CORROSIVES
CLASS 9	MISC. HAZARDOUS MATERIALS
ORM	OTHER REGULATED MATERIALS

FOR A COMPLETE DEFINITION, SEE 49 CFR 173.2

Attachment 18

ACCUMULATION POINT WEEKLY CHECKLIST

Answer with yts, no, or n/a:	wk1	wk2	wk3	wk4	wk5	wk6
Date Accomplished:						
1. Is the container open?						
2. Is rust/corrosion found on the container?						
3. Is the container in good condition (i.e. no severe rusting, bulging, or structural defects)? (refer to 40 CFR 264.171)						
4. Is the HW label in place and legible?						
5. Is the UN/NA number correct?						
6. Is the EPA number correct?						
7. Is the Accumulation Start Date on the label of full containers?						
8. Is HW stored more than 3 days (72 hours) once the container is full?						
9. Are the contents identified on the container?						
10. Are Flammable Liquids (Flash Point <140F) marked "Flammable"?						
11. Are Flammable Liquids grounded to an approved ground?						
12. Is the "No Smoking" sign posted?						
13. Is the Accumulation Point sign in place?						
14. Is the information on the Accumulation Point sign current?						
15. Is there any evidence of damage or discolored vegetation?						
16. Is there any evidence of spillage?						
17. Are any air emissions evident?						
18. Is there less than 4 inches of free space in liquid drums?						
19. Is there a current Profile Sheet on each waste generated?						
20. Has a Waste Stream Characterization Process document been initiated for all waste streams to meet the frequency of analysis requirements? (Attachment 3 to CAFBI 32-7042)						
21. Are training records current?						
21. Time inspection completed.						
Wk 1 Print Name..... Signature..... Wk 2 Print Name..... Signature..... Wk 3 Print Name..... Signature..... Wk 4 Print Name..... Signature..... Wk 5 Print Name..... Signature..... Wk 6 Print Name..... Signature..... Comments:.....						

Attachment 19

HAZARDOUS WASTE TURN-IN DOCUMENT (DRAFT)

TURN-IN DOCUMENT		
A. General Information:		
Unit/Office Symbol _____	Duty Telephone _____	
Accumulation Point Designation _____	Building No. _____	
Accumulation Point Manager/Crew Chief _____		
Describe process that generated the waste: _____		
Proper DOT Shipping Name _____		
EPA Waste Number(s) _____		
UN/NA Number _____	SC Waste Stream Number _____	
Profile Number _____	CLIN/Cost _____ / _____	
RC/CC (Responsible Code Cost Center)- Check box: 205500(TWCF) 244416(NON-TWCF)		
B. Estimate of Composition (Total must equal 100%):		
Component 1: _____	NSN: _____	(_____ %)
Component 2: _____	NSN: _____	(_____ %)
Component 3: _____	NSN: _____	(_____ %)
Component 4: _____	NSN: _____	(_____ %)
Component 5: _____	NSN: _____	(_____ %)
C. Certification:		
This is to certify that the above named materials are properly described, packaged, marked, and labeled		
and, if applicable, are in proper condition for transportation according to AF, DOT, and EPA regulations.		
Print Name/Grade: _____	Date: _____	Signature: _____
D. Storage and Acceptance Information		
Inspected/accepted by _____		
Date Inspected/accepted _____		
Accumulation Start Date _____		
Drum Number(s)/Weight _____		
<i>Draft Form</i>		

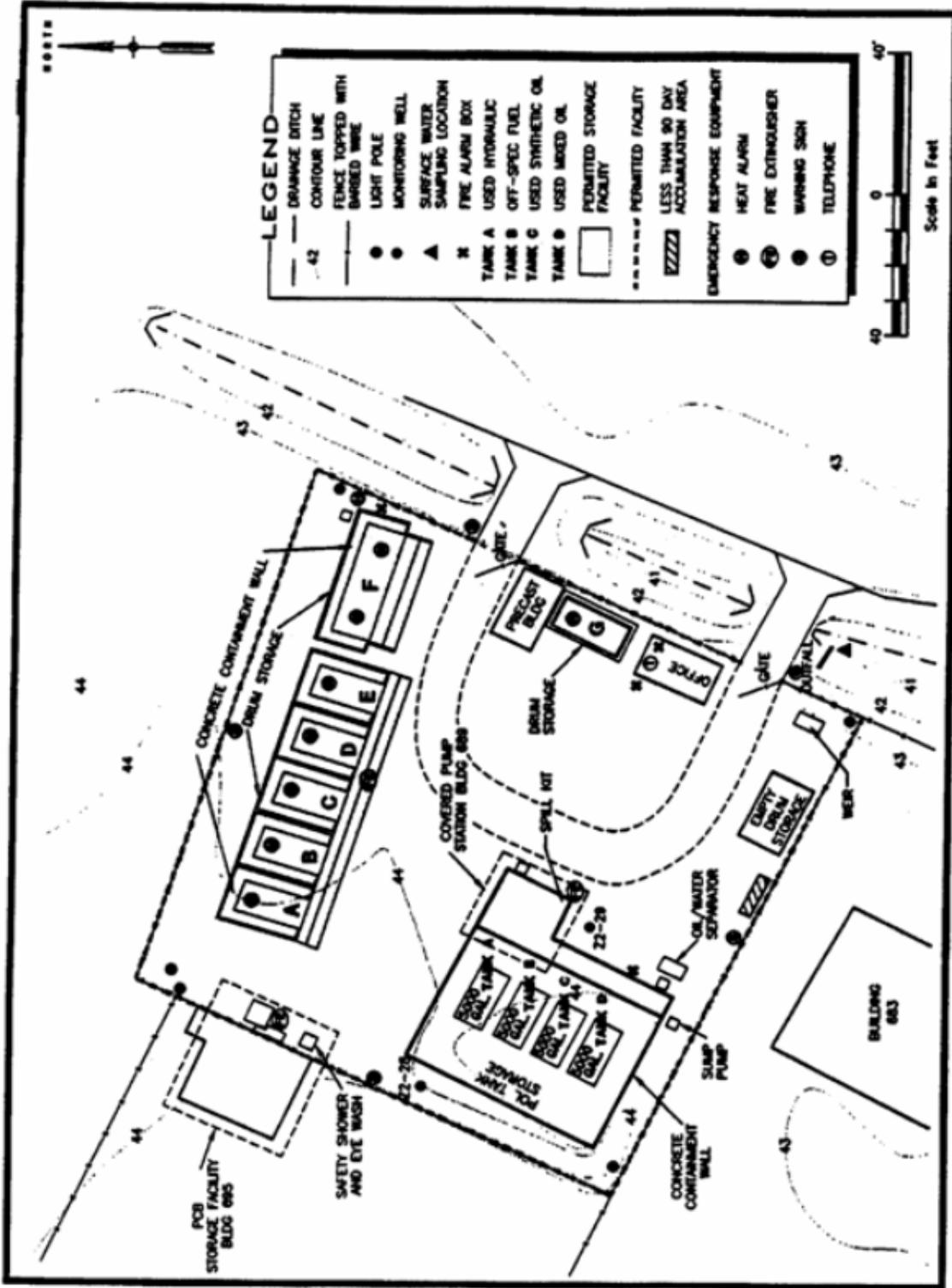
Attachment 20

PERMITTED EPA WASTE CODES

D001	F002	U002
D002	F003	U060
D003	F005	U075
D004		U080
D005		U151
D006		U154
D007		U159
D008		U162
D009		U220
D010		U226
D011		U228
D018		U239
D025		
D026		
D035		

Attachment 21

HAZARDOUS WASTE YARD LAYOUT



Attachment 25

MATERIAL PENDING ANALYSIS (MPA) LABEL

**THIS CONTAINER ON HOLD
PENDING ANALYSIS**

CONTENTS _____

ORIGIN OF MATERIALS _____

ADDRESS _____

CONTACT _____

**DO NOT TAMPER WITH CONTAINER
AUTHORIZED PERSONNEL ONLY**

Lab Safety Supply Inc. Reorder No. 31187

Attachment 26

WASTE STREAM CHARACTERIZATION PROCESS DOCUMENT FOR CONTRACTORS

Date: _____

Name: _____

Please Print

Company Name: _____

Phone and Fax Number: _____ / _____

Project Number: _____

Building Number and/or location where waste is generated: _____

Project Description:

Describe how/why waste was generated:

Amount/Volume of waste: _____

Contact 437 CES/CEVP to determine if waste was generated in an Area of Concern (AOC), a SWMU, Corrective Action Unit or a contaminated area?

POC is Bo Camp or Marvin Sturdivant at: 963-4976.

Waste was generated in one of the above described areas:

Yes _____ No _____

Contaminants of concern: _____

437 CES/CEVP Signature: _____

Contractor must attach analytical lab data and provide this document to 437 CES/CEVQ well in advance of shipment of waste. 437 CES/CEVQ must sign the waste manifest/shipping document.

POC is Henry Pape (963-4977).

CONTRACTOR CERTIFICATION

CONTRACTOR'S ESTIMATE OF WASTE COMPOSITION

Describe in detail what is in the drum/ roll off/ tank.

<u>Component</u>	<u>Estimated Amount</u>
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %

The estimated percentages should total 100%.

Contractor Certification

This signature certifies that the description above accurately describes the waste in the drum/ roll off/ or tank.

Print Name

Telephone #

Signature

Date

Attachment 27

RECORDS REQUIRED TO BE MAINTAINED

Records Required to be Maintained Per 40 CFR Requirements ⊕⊕

Record or File	Retention Time	Citation
Hazardous Waste determination documentation	3 years from the date that the waste was last sent to a treatment, storage, or disposal facility ⊕	40 CFR 262.11
Annual Report	3 years from the due date of the report ⊕	40 CFR 262.41
Hazardous Waste Manifest	3 years from the day the waste was accepted by the initial transporter ⊕	40CFR 262.20
Accumulation Site inspection logs	3 years from the date the inspection was conducted ⊕	40 CFR 262.34 40 CFR 265.174
Exception reports	3 years from the due date of the report ⊕	40 CFR 262.42
Land restricted waste determination	5 years from the date determination was required to be conducted. If not required, 5 years from the date the waste was last sent to a TSD facility ⊕	40 CFR 268.7
Land restriction notice and certification	5 years from the date the waste was last sent to a TSD facility ⊕	40 CFR 268.7
Notification of intent to export waste	3 years from the date the hazardous waste was accepted by the initial transporter ⊕	40 CFR 262.53
EPA acknowledgement of consent (for exports)	3 years from the date the hazardous waste was accepted by the initial transporter ⊕	40 CFR 262.51 40 CFR 262.53
Waste export confirmation of delivery	3 years from the date the hazardous waste was accepted by the initial transporter ⊕	40 CFR 262.54
Annual report (required of primary exporters of hazardous waste)	3 years from the date the hazardous waste was accepted by the initial transporter ⊕	40 CFR 262.56
Employee training records	Current personnel: until closure of facility. Former personnel: 3 years from date the individual last worked at facility	40 CFR 262.34 40 CFR 265.16

⊕ The periods of retention are extended automatically during the course of any unresolved enforcement action or as requested by EPA.

⊕⊕ These 40 CFR requirements are provided for information only. CAFB will comply with AFR 4-20, Table 19-1, Rule 17 which requires these records to be destroyed 50 years from the date of the record or in January 2031, whichever is later. CAFB will retain these records for 50 years.

Attachment 28

UNIVERSAL WASTE LABEL

**UNIVERSAL
WASTE**

EPA ID NUMBER _____

CONTENTS _____

ACCUMULATION START DATE _____

SHIPPER _____

ADDRESS _____

CITY, STATE, ZIP _____

Attachment 29

JP-8 NOTICE TO FILE



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 437TH AIRLIFT WING (AMC)

7 April 03

MEMORANDUM FOR FILE

This is a notice to file that Charleston Air Force Base accumulates off-specification JP-8 fuel as a commercial chemical product to be burned for energy recovery. The off-specification fuel is generated at various maintenance locations and is accumulated in 55 gallon drums or larger volume fuel bowsers. These containers are labeled "Contaminated JP-8".

When the drums/bowsers are full, they are delivered to the Hazardous Waste Facility where the off-specification fuel is pumped into a bulk 5,000 gallon tank for storage until the tank is full. When full, the fuel in the tank is provided to a utility company to be burned for energy recovery.

40 CFR 261.2(c)(2)(ii) exempts from RCRA commercial products that are burned for energy recovery if they are themselves fuels. Refer to EPA FAXBACK 11938 attached.

One exception to this is JP-8 that becomes contaminated with gasoline (MOGAS). JP-8 contaminated with gasoline must be accumulated as hazardous waste.

Shops accumulating Contaminated JP-8 must keep a copy of this notice on site.


Henry Pape
Hazardous Waste Program Manager

AMC—GLOBAL REACH FOR AMERICA

View Record Detail

back 11938

9441.1995(04)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

February 6, 1995

Mr. John W. Osborne
Manager of Safety and Environmental Quality
United Beechcraft, Inc.
P.O. Box 2966
Wichita, Kansas 67201-2966

Dear Mr. Osborne:

Thank you for your letter dated October 18, 1994, requesting an interpretation regarding the regulatory status of residual aviation fuels that are burned for energy recovery.

As you correctly note in your letter, off-specification fuels, including gasoline, jet fuel, kerosene, diesel, etc. that exhibit a hazardous characteristic and are burned for energy recovery are excluded from regulation under RCRA as commercial chemical products. The RCRA regulations provide that commercial chemical products are not solid wastes when used as fuels (i.e., burned for energy recovery) if that is their intended purpose (40 CFR 261.2(c)(2)(ii)).

According to your letter, there are a number of different ways in which the residual aviation fuels are generated by your company (e.g., during maintenance of the aircraft, as a result of spills, etc.). You ask whether the manner in which the residual fuels are generated is a factor in determining whether they meet the definition of off-specification commercial chemical products under RCRA. The answer, in most cases, is no. The manner in which the fuels become off-specification is not generally a factor in determining how they are regulated. One exception is when the fuels have been mixed with or contaminated by non-fuel listed or characteristic hazardous wastes. In that case, the off-specification fuel would be regulated as a hazardous waste under RCRA even when burned for energy recovery.

There are also a number of potential uses for the off-specification aviation fuels that you generate, all of which involve burning for energy recovery, according to your letter. The residual aviation fuel may be upgraded to specification by blending it with other types of fuel (e.g., gasoline, diesel, etc.) and then used to fuel aircraft or it may be used to power boilers and industrial furnaces. Your question is whether these uses would be considered "use within the intended purpose" as defined by RCRA. The answer is yes. As long as the residual fuels are being legitimately burned for energy recovery, they would be considered as being used for their intended purpose. EPA does not distinguish between different types of burning for energy recovery for purposes of determining the regulatory status of residual fuels under 261.2(c)(2)(ii).

It is important to note that EPA Regions and States

authorized to implement the hazardous waste program make determinations regarding the requirements that apply to specific materials and facilities. Some States have programs more stringent than the Federal hazardous waste program. I hope this letter addresses your concerns. If you have additional questions, please call Becky Daiss of my staff at (202) 260-8718.

Sincerely,

Michael J. Petruska, Chief
Regulatory Development Branch

Attachment

United Beechcraft, Inc.
P.O. Box 2966
Wichita, KS 67201-2966

October 18, 1994

Mr. David Bussard, Director
Characterization and Assessment Division
EPA
401 M St. S.W.
Washington, D.C. 20406

Dear Mr. Bussard:

We would like to obtain an interpretation of the status of our residual/waste stream of aviation gasoline and jet fuel.

In a letter (copy attached) from Mr. Devereaux Barnes to Mr. Joe Haak a similar situation is discussed and interpreted. We want to be sure of any extension of the interpretation to our particular situation so that we remain in compliance with the regulations.

To put the interpretation request in context, our company is comprised of 17 on-airport facilities that provide a variety of services to the aviation community. As a result of the services and due to the stringent fuel quality specifications that must be adhered to in order to ensure safety of flight, a residual fuel is generated.

There are generally four situations that may generate this residual fuel as the following describes.

1. In the process of quality control of the fuel, we sump small quantities of fuel at various points in the storage-to-aircraft fueling system. The result is a residual fuel that has some water from condensation, rust particles and so on.
2. At times in the maintenance of the airplanes, fuel lines or tanks are required to be emptied in order to accomplish the needed repair task. If the fuel can not be returned to the aircraft it came from, it is collected as a residual fuel.
3. In the process of receiving, storing and transferring of fuels or in the maintenance of the fuel system or aircraft refuelers small drippages result in the generation of residual fuel.
4. And the last case would be where we have had a leak or

spillage and have used clean-up material to absorb the fuel.

We make note of two statements in the letter previously referenced. The first "a commercial chemical product is not a solid waste if it itself is a fuel" ... "it is implicit in the rules that the same reasoning applies to commercial chemical products that are not listed". Secondly, in the following paragraph "Although the reclaimed commercial chemical product is burned for energy recovery it is not a solid waste because this was its intended purpose".

While the McDonnell Douglas off-spec fuel would be used to produce apparently more aviation fuel our residual fuel would not be used for that specific purpose. However, it would be used for fuel, i.e. energy recovery. How broadly defined is "fuel" within the context of "intended purpose"? Aviation fuel only for aviation related purposes?

We have found our residual fuel could be used in three different ways as a fuel.

1. Our residual fuel is not up to aviation fuel specifications, but it is acceptable when blended with other types of fuel, e.g. automotive, diesel, etc., and it is used within the context of that fuel's intended purpose.
2. It could be used in kilns, boilers, generators as a fuel to power this equipment's use in a production process of some kind.
3. The fuel soaked clean-up material has enough Btu value to be used as a fuel to run kilns, boilers, etc.

Does how the residual fuel end up being used as a fuel make a difference in the interpretation of "intended purpose"?

It would be a fair statement to make that if 100 percent pure aviation fuel were delivered instead of the residual fuel, the pure product would not be handled substantially different by the fuel user - it is just fuel to them.

We would make a follow-on assumption the receiving process or facility would not need to have a Part B RCRA permit, provided the Agency saw our residual fuel as being used for its intended purpose.

It may be helpful to summarize our questions after having interwoven our specific situation with questions and issues.

1. How does your Agency's interpretation of "fuel" and "intended purpose" view our residual fuel?
2. Does the interpretation change based on how the residual fuel was derived based on the four general situations?
3. Does the interpretation change depending on how the residual fuel is used as a fuel in the end process?
4. Assuming your interpretation is that our residual fuel is a "fuel" and not a hazardous waste, then it would not be necessary for it to be handled and accumulated at our sites as a hazardous waste or dispose at a RCRA permitted site. Is that assumption correct?

Hopefully, this has given you all the pertinent information to the

issues. If something has been overlooked please feel free to write or call me at (316) 676-7657. We do appreciate your attention as we are concerned about conducting our business in the proper manner.

John W. Osborne
Manager of Safety and Environmental Quality
United Beechcraft, Inc.

JWO:vlb

Attachment

Attachment 30

EMPTY CONTAINER NOTICE

Empty Container Notice

1. 40 CFR 261.7 provides the regulatory definition of "empty" containers. In summary, a container less than or equal to 110 gallons and which does not contain a compressed gas or an acute hazardous waste, is "empty" if:

All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping and aspirating, and

No more than one inch of residue remain on the bottom of the container, or

No more than 3 percent by weight of the total capacity of the container remains in the container.

Any waste remaining in such "empty" containers are not subject to regulation as hazardous waste. These containers are then subject to regulation as solid waste. However, since we also have a goal to minimize solid waste, we need to recycle the empty containers when possible.

2. EPA policy interpretation letters have taken a very strict definition of "empty." For this reason, personnel utilizing materials need to take extra care when emptying/using materials from containers. Most containers are designed so that the container openings will allow all liquids to drain from the container. Personnel should allow adequate time for the liquids to drain from the containers. In many instances, supposedly empty containers are not really empty because enough residues remain in the container and these residues can be "poured" out of the container; therefore such containers are not "empty" as defined in the 40 CFR. Violation of the 40 CFR requirements could lead to contamination of the environment, Notices of Violation and fines for Charleston AFB.

3. Personnel must take extra care when emptying containers. Users should utilize the residues to the fullest extent in the process for which the materials are intended. Left over small amounts of residues that cannot be utilized in the current job/process must be saved for the next job/process or transferred to a like container of material for use on the next job/process.

Some containers have wide mouth openings, e.g., 1 gallon paint cans, dry wall containers, etc. Users of these materials are required to take care when using these materials, to remove all usable materials, e.g., wipe the inside of the paint can with the brush so that residues are removed to the fullest extent, scrape the drywall material from the container with a putty knife, etc. This does require extra effort on the user, however, this extra effort must be taken to ensure compliance with the regulations regarding "empty" containers.

4. Locations/storage areas used to store hazardous materials/empty containers for HazMat pickup should be free of any spill residues and all containers, whether empty or partially full, should be closed with original closures in place. Users are required to avoid the accumulation of residues on the exterior of containers. Users are also reminded to ensure incompatible materials are not mixed in storage.

5. CEV point of contact for any additional information is Henry Pape at x4977.

Attachment 31

EMPTY AEROSOL CONTAINER NOTICE

Empty Aerosol Container Notice

1. 40 CFR 261.7 provides the regulatory definition of "empty" aerosol containers. In summary, an aerosol container i.e., a compressed gas container, less than or equal to 110 gallons and which does not contain an acute hazardous waste, is "empty" if:

All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping and aspirating, and

No more than one inch of residue remain on the bottom of the container, or

No more than 3 percent by weight of the total capacity of the container remains in the container, and

The pressure in the container approaches atmospheric.

Any waste remaining in such "empty" containers are not subject to regulation as hazardous waste. These containers are then subject to regulation as solid waste. However, since we also have a goal to minimize solid waste, we need to recycle the empty containers when possible.

2. EPA policy interpretation letters have taken a very strict definition of "empty." For this reason, personnel utilizing aerosol containers need to take extra care to ensure the contents of the container are used to the fullest extent. For aerosol containers, if the user cannot detect any liquid in the container when shaken and if all gases have been bled from the container, the container will be considered empty. If liquid is detected when the aerosol container is shaken or if all gases have not bled from the container, these aerosol containers are not "empty" as defined in the 40 CFR. Violation of the 40 CFR requirements could lead to contamination of the environment, Notices of Violation and fines for Charleston AFB.

3. Personnel must take extra care when emptying containers. Users should utilize the residues to the fullest extent in the process for which the materials are intended. Left over small amounts of residues that cannot be utilized in the current job/process must be saved for the next job/process or transferred to a like container of material for use on the next job/process.

4. Locations/storage areas used to store hazardous materials/empty containers for HazMat pickup should be free of any spill residues and all containers, whether empty or partially full, should be closed with original closures in place. Users are required to avoid the accumulation of residues on the exterior of containers. Users are also reminded to ensure incompatible materials are not mixed in storage.

5. CEV point of contact for any additional information is Henry Pape at x4977.

Attachment 32

LEAD TIRE WEIGHTS RECYCLING CERTIFICATION

Lead tire weights at Charleston AFB will be recycled as scrap metal. Charleston claims the scrap metal exclusion for the lead tire weights as allowed per 40 CFR 261.4(a)(13). This exclusion states that scrap metal being recycled is not a solid waste. Also, 40 CFR 261.6(a)(3)(ii) requirements for recyclable materials, states that scrap metal being recycled is not subject to regulation under Parts 262 through 266 or Part 268, 270, or 124 of 40 CFR.

Containers holding lead tire weights will be labeled/marked "**Scrap metal (lead)**".

Businesses receiving lead tire weights from Charleston AFB must certify that all lead tire weights received from Charleston AFB will be recycled in accordance with all federal, state and local requirements. This certification will be kept on file at the Charleston AFB Scrap Metal Yard.

Certification:

Business Name: _____

Business Address: _____

Business Telephone Number: _____

Print name of person receiving scrap metal:

Amount Received (lbs): _____

Certification: I certify that the scrap metal (lead) is being recycled in accordance with all federal, state and local requirements.

Print Name

Date

Signature

Date

Attachment 33

LEAD RECYCLING CERITIFICATION

Lead will be collected at the firing range at Charleston AFB, and it will be recycled as scrap metal. Charleston claims the scrap metal exclusion for the lead as allowed per 40 CFR 261.4(a)(13). This exclusion states that scrap metal being recycled is not a solid waste. Also, 40 CFR 261.6(a)(3)(ii) requirements for recyclable materials, states that scrap metal being recycled is not subject to regulation under Parts 262 through 266 or Part 268, 270, or 124 of 40 CFR.

Containers holding lead fragments will be labeled/marked "Scrap metal (lead)".

Businesses receiving lead fragments from Charleston AFB must certify that all lead received from Charleston AFB will be recycled in accordance with all federal, state and local requirements. This certification will be kept on file at 437 CES/CEVQ, bldg 247.

Certification:

Business Name: _____

Business Address: _____

Business Telephone Number: _____

Print name of person receiving scrap metal: _____

Amount Received (lbs): _____

Certification: I certify that the scrap metal (lead) is being recycled in accordance with all federal, state and local requirements.

Signature

Date

Print Name

Attachment 34**WRITTEN JOB DESCRIPTION FOR HAZARDOUS WASTE MANAGEMENT POSITIONS****WRITTEN JOB DESCRIPTION: (SC DHEC 264.16 R.61-79.16)****HAZARDOUS WASTE PROGRAM MANAGER**

1. General. This document describes responsibilities of the Hazardous Waste Program Manager. This program is located in the Environmental Flight, Civil Engineering Squadron. The flight is responsible for all activities related to the management, preparation and/or application of engineering and environmental planning technical data, studies and evaluations of systems and processes in support of the mission. This position prepares, implements and maintains plans and programs designed to achieve the most environmentally sound uses of natural and man-made resources.

2. Major Duties. Ensures compliance with the Resource Conservation and Recovery Act (RCRA) in accordance with US Environmental Protection Agency and South Carolina Department of Health and Environmental Control regulations. These duties include:

- 2.1. Prepares and maintains the Base Hazardous Waste Management Plan.
- 2.2. Prepares the Computerized Hazardous Waste Quarterly Reports submitted to the state.
- 2.3. Prepares hazardous wastes profile sheets and manifests.
- 2.4. Performs inspections of shipments to ensure containers are properly marked and labeled.
- 2.5. Provides requests to Bioengineering for sampling and analysis of waste streams.
- 2.6. Ensures compliance with Part B Permit requirements.
- 2.7. Performs periodic inspections of Accumulation Points and the Part B Permitted Facility.
- 2.8. Conducts training classes for Accumulation Point Managers/handlers of hazardous wastes.
- 2.9. Administers a waste minimization program to reduce the amount of hazardous wastes being generated. This includes process reviews to eliminate use of hazardous materials where possible.

3. Training. RCRA Facility Generator (Part B Permit) Training and DOT Hazardous Material Transportation Training, initial and annual refresher, are required for this position. Training must enable the Hazardous Waste Program Manager to perform the duties in a way that ensures compliance with hazardous waste regulations and to respond to emergencies.

4. Education and Qualifications. Basic understanding of verbal and/or written instructions. College degree in a related field required.

WRITTEN JOB DESCRIPTION: (SC DHEC R.61-79.246.16)**PERMITTED STORAGE FACILITY PERSONNEL**

1. General. This document describes responsibilities of operators of the permitted hazardous waste storage facility. Additional information regarding handling and storage of hazardous waste is provided in the Base Hazardous Waste Management Plan.

2. Major Duties. Responsible for the general operation of the permitted storage facility. Ensures compliance with all permit requirements through daily inspection of facility equipment and stored hazardous waste. Ensures waste received into the facility is in proper containers and has the correct turn-in documentation to meet all federal and state hazardous waste regulations and Air Force instructions/guidance. Prepares all paperwork and interfaces with the Defense Reutilization and Marketing Office for proper disposal of hazardous wastes. Provides guidance to Accumulation Point Managers on proper hazardous waste management and turn-in procedures. Coordinates hazardous waste turn-ins/paperwork with Civil Engineer Environmental Flight to ensure proper reports are filed with the South Carolina Department of Health and Environmental Control. Additional specific duties include:

2.1. Receives hazardous wastes into the permitted storage facility.

2.1.1. Checks the containers for proper labels, marking, container type, Accumulation Start Date, etc.

2.1.2. Checks CAFB Form 414 Hazardous Waste Turn-In Document for proper information.

2.1.3. Records container weights on CAFB Form 414 and sign for receipt of wastes.

2.1.4. Marks container serial number on drum/container.

2.2. Places containers in proper storage area ensuring incompatible materials are not stored together.

2.3. Maintains Accumulation Point, if HW is accumulated, per Written Job Description for Managers of Hazardous Waste Accumulation Points.

2.4. Inspects the Hazardous Waste Storage Facility daily, except weekends and holidays, and records the inspection on the Charleston AFB Hazardous Waste Storage Facility Daily Checklist. Identify discrepancies on the Discrepancy Log.

2.5. Maintains the Hazardous Waste Container Log.

2.6. Should rain water accumulate in the containment cells, drains the cells per instructions in the Hazardous Waste Management Plan.

2.7. Prepares AF2005/1348 documents for disposal of hazardous waste.

2.8. Stages items for shipment. Contractor personnel will weigh all containers. Document any discrepancies in container weight recorded by contractor personnel and container weight recorded on CAFB Form 414, Turn-in Document and notify CEV of the discrepancy.

2.9. Ensures that hazardous wastes are collected and stored in approved containers. Generally, containers that have been used to ship hazardous materials can be used to ship hazardous wastes of the same chemical composition. If a question arises concerning the selection of containers, contacts CEV.

2.10. Maintains containers in proper condition, e.g. no pitting, no sharp edge creases or dents, no material defects, no bulging heads.

2.11. Ensures containers are properly marked and labeled before they receive any hazardous waste. Ensures that hazardous waste is not placed in a container that is not properly marked.

2.12. Maintains integrity of tanks. Inspects tanks for leaks, spills or damage using the Charleston AFB Hazardous Waste Storage Facility Daily Checklist. Uses checklist to inspect integrity of secondary containment area. Identifies discrepancies in the Discrepancy Log.

2.13. Should rain water accumulate in the secondary containment area, drains the cells per instructions in the Hazardous Waste Management Plan.

2.14. Prepares AF2005/1348 documents for disposal of hazardous waste.

2.15. Maintains and operates pumping equipment for four 5,000 gallon off-specification fuel and used oil storage tanks.

3. **Training.** Hazardous Waste Storage Facility Personnel must complete hazardous waste training, initial and annual refresher training. Training must enable personnel to perform their duties in a way that ensures compliance with hazardous wastes regulations and to respond to emergencies. The training scope is provided in the Hazardous Waste Management Plan.

4. **Education and Qualifications.** Basic understanding of written and verbal instructions. High school diploma required.

WRITTEN JOB DESCRIPTION: (SC DEHC R61.264.16)

MANAGERS OF HAZARDOUS WASTE ACCUMULATION POINTS AND ACCUMULATION SITES

1. **General.** This document describes responsibilities of operators of the Base hazardous waste storage areas. Additional information regarding handling and storage of hazardous waste is provided in the base Hazardous Waste Management Plan.

2. Major Duties

2.1. Assumes overall responsibility for management of the hazardous waste Accumulation Point and ensure compliance with the base Hazardous Waste Management Plan.

2.2. Ensures compliance with the Base Hazardous Waste Management Plan for determination and turn-in of hazardous waste and procedures for unknown/orphan drums.

2.3. Ensures that all hazardous waste is placed in an approved Accumulation Point.

2.4. Maintains control over the Accumulation Point such that only approved personnel can place wastes into the hazardous waste containers.

2.5. Ensures Accumulation Point has proper signs/postings.

2.6. Ensures that the Accumulation Point has a spill kit.

2.7. Ensures that an approved fire extinguisher is readily available if flammable hazardous waste is stored at the Accumulation Point.

2.8. Ensures personal protective equipment is available at the Accumulation Point.

2.9. Reports releases, fires or explosions to the Base Fire Department, ext. 117. Be prepared to familiarize response forces with facilities and with characteristics of the waste. Responsibilities for spills are described in the Spill Prevention Control and Countermeasures Plan.

3. **Training.** Generator Accumulation Point, Accumulation Site and other personnel involved in the handling of hazardous waste must complete hazardous waste training, initial and annual refresher training. Training must enable personnel to properly handle hazardous wastes and to respond effectively to emergencies.

4. **Education and Qualifications.** Basic understanding of written and verbal instructions. High school diploma required.

Attachment 35

HURRICANE CHECKLIST

Hurricane Checklist**Permitted TSD Facility
And
Hazardous Waste Accumulation Points****Pre-Hurricane Conditions****A. Permitted TSD Facility**

1. Ensure all bulk tank valves are closed. Ensure that all tank manhole covers are secured.
2. Strap together and cover drums on each pad.
3. Secure all loose items, i.e. strap to buildings or place in buildings.
4. Retrieve operating records and take to CEV for safekeeping.

B. Hazardous Waste Accumulation Points

1. Inspect accumulation point. Remove all funnels, fill ports, etc. from drums and secure bungs and drum rings. Secure all bowsers and drums.
2. Secure all accumulation point records.

Post-Hurricane (Permitted TSD Facility and all Hazardous Waste Accumulation Points

1. Ensure damage assessment team inspects TSD facility and Accumulation Points.
2. If releases have occurred, implement the base spill response plan.
3. Once all clear, return TSD facility and Accumulation Points to operating conditions.

Attachment 36**HAZARDOUS MATERIAL/HAZARDOUS WASTE SECURITY PLAN**

**Hazardous Material/Waste Security Plan
For
Charleston AFB Hazardous Waste Storage Facility (Building 691/695)
And
Base Wide Hazardous Wastes Accumulation Points**

Purpose

The purpose of this security plan is to ensure hazardous materials/hazardous waste workers are aware of potential security issues/threats regarding the storage and shipment of hazardous materials/hazardous wastes. A security plan is required by 49 CFR 172.800(b). The purpose of the plan is to ensure hazardous materials/wastes do not fall into the wrong hands. In the wrong hands, hazardous materials pose a significant security threat, particularly those that may be used as weapons of mass destruction.

Applicability

This training is applicable to Hazardous Waste Accumulation Point Managers/Crew Chiefs and alternates, personnel who work in the Hazardous Waste Facility and persons who sign hazardous waste manifests.

Hazardous Waste Storage Facility Security Requirements

Facility personnel will:

Inspect the facility fencing daily to ensure fence is in tact and has not been breached. If the fencing has been breached notify your supervisor and 437 CES/CEV who will inform base Security Forces.

Ensure the gates are locked when leaving the facility.

Be aware of any unusual activities, suspicious incidents or events, or persons in the vicinity of the facility. If unusual activities or persons are observed, notify 437 CES/CEV.

Restrict the availability of information related to the Hazardous Waste Storage Facility. Do not provide any information about the facility unless the requesting persons have a legitimate need to know. Know who is requesting the information and why. Notify 437 CES/CEV of any unusual occurrences.

Only allow entry to the facility by persons having a legitimate need to enter.

Periodically inventory the quantity of hazardous materials on site in order to recognize if a theft has occurred.

Verify the identity of the hazardous material carriers and/or the driver prior to loading a hazardous material/waste. Ensure hazardous wastes shipments are released only to appropriately contracted personnel identified by 437 CES/CEV and/or the DRMO agent.

Attend the initial/annual Hazardous Waste Accumulation Point Management training class taught by 437 CES/CEV.

Maintain a copy of this security plan at the Hazardous Waste Storage Facility.

Hazardous Waste Accumulation Point Security Requirements

Hazardous Waste Accumulation Point Crew Chiefs will:

Take appropriate steps to prevent unauthorized access to the Accumulation Point.

Inspect the Accumulation Point daily to ensure the Accumulation Point has not been breached. If the Accumulation Point has been breached notify your supervisor and 437 CES/CEV who will inform base Security Forces.

Ensure the Accumulation Point is appropriately secured when leaving the facility.

Be aware of any unusual activities, suspicious incidents or events, or persons in the vicinity of the Accumulation Point. If unusual activities or persons are observed, notify your supervisor and 437 CES/CEV.

Restrict the availability of information related to the Accumulation Point. Do not provide any information about the Accumulation Point unless the requesting persons have a legitimate need to know. Know who is requesting the information and why. Notify your supervisor and 437 CES/CEV of any unusual occurrences.

Ensure hazardous wastes turn-ins/deliveries to the Hazardous Waste Storage Facility are delivered only by appropriately trained and authorized personnel.

Attend the initial/annual Hazardous Waste Accumulation Point Management training class taught by 437 CES/CEV.

Maintain a copy of this security plan in the Hazardous Waste Accumulation Point binder.

437 CES/CEV Requirements

Hazardous Waste Program Manager will:

Provide initial and annual training on the requirements of this Security Plan and document the training. Security training requirements of this plan will be provided in the annual Hazardous Waste Accumulation Point Management training class. The training material is presented via slides, discussions and viewing the U. S. Department of Transportation Hazmat Transportation Security Awareness Training Module (CD-ROM).

Verify the hazardous material/waste carriers have an appropriate employee hiring and review process, including background checks, and an on-going security training program.

Conduct vulnerability assessments as needed using the following attached DOT checklists for guidance:

Facility Security Checklist

Security Checklist for the Shipper of Hazmat

Security Checklist for the Carrier of Hazmat

Security Checklist for the Receiver of Hazmat

Guidelines for Conducting Employee Background Check

Facility Security Checklist

U.S. Department of Transportation

Research and Special Programs Administration

Question / Response Recommendation

1. Is the facility located in an area of high, medium, or low population? H M L

2. What is the distance to the police department and their likely response time?
3. What is the distance to emergency response personnel/fire department and their likely response time?
4. Have you conducted a vulnerability assessment of your hazardous materials? Yes No
5. How many points of access are there to the facility?
6. Do the access points have an entrance registration procedure? Yes No
7. Are there security personnel at the access points? Yes No
8. Are all entries to the facility recorded? Yes No
9. What are the procedures for exiting?
10. Are all departures from the facility recorded? Yes No
11. Are there specific procedures for closing and locking up the facility? Yes No
12. Is there an alarm system on the perimeter of the facility? Yes No
13. Is there an alarm system on the access points? Yes No
14. Are cameras used to monitor the facility? Yes No
15. Are security personnel used to monitor the facility? Yes No
16. Is there adequate lighting for the facility grounds? Yes No
17. Is there a fence or similar barrier around the perimeter of the facility? Yes No
18. Is the barrier in good repair? Yes No
19. How easy would it be to breach the barrier?
20. When was the last time that locks were changed?
21. Who has keys to these locks?
22. Is the facility security in compliance with all federal, state, and local laws and regulations?
Yes No
23. Are security logs kept? Yes No
24. When was the last time security logs and/or incident reports were reviewed?
25. Is there a current security plan and when was it last reviewed? Yes No

Security Checklist for the Shipper of Hazmat
U.S. Department of Transportation
Research and Special Programs Administration
Question / Response Recommendation

1. How are hazardous materials secured?
2. Does your company protect hazardous materials using alarms and/or other security systems?
3. How are unauthorized personnel restricted from area?
4. How are untrained personnel restricted from the area?
5. What records are maintained to inventory hazmat?

6. How often is the inventory audited?
7. What is the reporting procedure if material is missing from the inventory?
8. Do your employees have a checklist for packaging and transferring hazmat?
9. Do they use the checklists effectively?
10. Does your company implement routine security inspections?
11. How are shipping personnel trained?
12. How are training records kept?
13. Are handlers of hazardous materials trained in the recognition and disposal of suspect packages?
14. Are all personnel trained in recognizing and dealing with aberrant behavior?
15. Are employee background checks being conducted?
16. Are background checks periodically reviewed and/or updated? How often?
17. Does your company hold regular employee/ management meetings to discuss security measures and awareness?
18. How is the carrier's identification matched to shipping records?
19. What program do you have to audit your carrier's security procedures?
20. What procedure do you have to verify if the carrier is authorized to carry your hazmat?
21. How is the carrier's equipment checked for safety?
22. What procedures do you have to verify that your hazmat has been securely loaded and properly labeled?
23. How do you track the shipment after it has left your facility?
24. When is the receiver notified that the shipment is en route?
25. What information is provided to the receiver?
26. Is this information adequate?
27. What procedure do you have to follow up on the safe arrival of hazmat?

Security Checklist for the Carrier of Hazmat
U.S. Department of Transportation
Research and Special Programs Administration
Question / Response Recommendation

1. How are vehicles with hazardous materials secured?
2. How are unauthorized personnel restricted from the area?
3. How are untrained personnel restricted from area?
4. How are your drivers/operators trained?
5. How are your maintenance people trained?
6. How are training records kept?

7. How do you verify that personnel meet all federal requirements for handling and transporting hazmat?
8. Are personnel trained in inspecting packages and recognizing suspect packages prior to accepting them for shipment?
9. Are all personnel trained in recognizing and dealing with aberrant behavior?
10. Are drivers/operators trained in marking, labeling, placarding, and packaging requirements?
11. Are employee background checks being conducted?
12. Are background checks periodically reviewed and/or updated? How often?
13. Do your operators/drivers carry the proper identification?
14. What procedure do you have to verify if your operator/driver is authorized to carry hazmat?
15. How is the equipment checked for safety?
16. Are security spot checks of personnel and vehicles conducted?
17. What monitoring and tracking equipment have you added to your fleet?
18. What procedures are in place for safeguarding hazardous materials during en route breakdowns and/or emergencies?
19. Are local law enforcement familiar with what you carry?
20. What procedure do you use to review a driver/operator's planned routes, layovers and equipment changes?
21. How does your driver/operator verify the site is expecting a pickup or delivery?
22. Is the driver/operator provided with a delivery point-of-contact and contact information?
23. Do you have a way to contact the driver 24 hours a day?
24. What procedure do you have to follow-up on the safe arrival of hazmat?

Security Checklist for the Receiver of Hazmat
U.S. Department of Transportation
Research and Special Programs Administration
Question / Response Recommendation

1. How are hazardous materials secured and stored after receipt?
2. Does your company protect hazardous materials using alarms and/or other security systems?
3. How do you verify that authorized personnel are available to receive and promptly store hazmat?
4. How are unauthorized personnel restricted from the area?
5. How are untrained personnel restricted from the area?
6. What procedure do you have to refuse receipt of suspect packages?
7. How often is the inventory audited?
8. What is the reporting procedure if material is missing from the inventory?

9. Do your employees have a checklist for receipt and temporary storage of hazmat?
10. Do they use the checklists effectively?
11. How are personnel trained?
12. How are training records kept?
13. Are handlers of hazardous materials trained in the recognition and disposal of suspect packages?
14. Are all personnel trained in recognizing and dealing with abnormal behavior?
15. Are employee background checks being conducted?
16. Are background checks periodically reviewed and/or updated? How often?
17. What procedure do you have to verify if the carrier's delivery is expected?
18. How is the carrier's identification matched to shipping records?
19. How is the carrier's equipment checked for safety and security?
20. What procedures do you have to verify that your hazmat is securely unloaded and stored?
21. How do you notify the shipper on receipt of a shipment?
22. What procedures are in place to inspect packages and shipping documents?
23. How do you notify the shipper of missing or damaged items?

**Guidelines for Conducting an
Employee Background Check
U.S. Department of Transportation
Research and Special Programs Administration**

- Gaps in employment
- Frequent job changes
- Check all names used by the applicant
- Type of military discharge
- Citizenship
- Present and prior residence information
- Personal references
- Criminal history
- Verify US citizenship for all employees
- For non-US citizens, verify that all immigration papers are on file and properly documented
- Include fingerprints and photos in the personnel file
- Conduct interviews with potential employee
- Use the interview to appraise personality, character, motivation, honesty, integrity, and reliability
- Report any suspicious information to your company's security department

